

# EXHIBIT 34

**PUBLIC VERSION - CONFIDENTIAL MATERIAL OMITTED**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

RYANAIR DAC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Case No.
	)	1:20-CV-01191-WCB
BOOKING HOLDINGS INC.,	)	
BOOKING.COM B.V., KAYAK	)	
SOFTWARE CORPORATION,	)	
PRICELINE.COM LLC, and AGODA	)	
COMPANY PTE. LTD.,	)	
	)	
Defendants.	)	
_____	)	

HIGHLY CONFIDENTIAL PURSUANT TO THE PROTECTIVE ORDER

Video-recorded videoconference deposition  
of TIMOTHY J. O'NEIL-DUNNE, taken remotely on behalf of  
the Plaintiff, beginning at 9:03 a.m. and ending at  
5:24 p.m., on Tuesday, September 26, 2023, before  
JOANNA B. BROWN, Certified Shorthand Reporter No. 8570,  
RPR, CRR, RMR.

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## APPEARANCES

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THERESA MAJERS, VIDEOGRAPHER

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(None.)

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Remotely; Tuesday, September 26, 2023

9:03 a.m.

(TIMOTHY J. O'NEIL-DUNNE,

deponent, was sworn and examined

and testified as follows:)

THE VIDEOGRAPHER: We are now on the record.

This begins Media File No. 1 in the deposition of

Timothy O'Neil-Dunne. We are taking this deposition

remotely via Zoom in the matter of Ryanair DAC versus

Booking Holdings, Inc., et al., filed in the

U.S. District Court for the District of Delaware,

Case No. 1:20-CV-01191-WCB.

Today is September 26, 2023. The time is

9:03 a.m. I am Theresa Majers, the videographer, from

Magna Legal Services. The court reporter is

Joanna Brown also with Magna Legal Services.

Counsel, please introduce yourselves and who

you represent starting with the questioning attorney.

MS. GIERHART: Cynthia Gierhart on behalf of

Ryanair.

MR. KASNER: Alex Kasner of Cooley, LLP, on

behalf of defendants. I have with me Kathleen Hartnett

also of Cooley, LLP, on behalf of defendants,

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1 based in Barcelona, and ClearTrip, which is a -- it's  
2 now owned by two companies because they split the  
3 company in two, but it was an OTA based in India.  
4 Excuse me.

5 Q And I know you said you didn't advise on  
6 screen scraping necessarily, but for either eDreams or  
7 ClearTrip, did you advise on booking airlines' flights  
8 who didn't get permission?

9 MR. KASNER: Object to the form.

10 THE WITNESS: It's not my role to define  
11 whether they are a commercial-issued crew to each. I  
12 advised the two companies on how to build a booking  
13 engine and how to contract with players to provide that  
14 capability.

15 BY MS. GIERHART:

16 Q Did those discussions involve discussions  
17 about which airlines they should sell?

18 MR. KASNER: Object to the form.

19 THE WITNESS: No. It wasn't a major topic;  
20 but, obviously, any content that was provided through  
21 those systems, these companies, eDreams and ClearTrip,  
22 for example, wanted to have as much product and service  
23 as they could sell to their customers and provide  
24 access to that content. So, yes, we assisted them in  
25 those processes.

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1 content, my expertise is on how to get access to the  
2 stuff behind a website, whether it's via a direct or an  
3 indirect form.

4 Q But you don't have a computer science  
5 background; right?

6 So your expertise would not extend to coding,  
7 for example; is that right?

8 MR. KASNER: Object to the form.

9 THE WITNESS: I think I've already said and  
10 it's stated in my documentation here I am not a coder;  
11 but I understand how the systems work, and I have deep  
12 experience in how they work. So my knowledge set is  
13 not, if you'd like, at the bits and bytes level. I am  
14 not a programmer. I am not a coder, although that term  
15 perhaps is becoming less and less succinct.

16 But I understand how they work, and I believe  
17 that I am an expert in that process and those designs  
18 and solutions and have familiarity with the different  
19 systems that do access -- access and utilize airline  
20 product inventory as well as products.

21 BY MS. GIERHART:

22 Q Okay. And are you testifying as an expert in  
23 authorized versus unauthorized access to a website?

24 MR. KASNER: Object to the form.

25 THE WITNESS: I am familiar with how airlines

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1 BY MS. GIERHART:

2 Q At any point, did you advise them that they  
3 might not be permitted to access certain airline  
4 content?

5 MR. KASNER: Objection to the form. Calls for  
6 a legal conclusion.

7 THE WITNESS: The requirement for the access  
8 was related to how they could get the access from a  
9 technological basis rather than anything else.

10 BY MS. GIERHART:

11 Q For purposes of this report, what is your area  
12 of expertise that you are an expert in?

13 A So, as you can tell from my CV and the  
14 introduction, I have had the privilege of being in this  
15 industry for 40 years. It's a long time. And as such,  
16 I have seen the evolution of distribution. The  
17 expertise that I'm providing for this report is to  
18 describe the marketplace, how it works, how it operates  
19 both from a technology and a commercial operations  
20 process.

21 Q So just to be clear with the technology, I  
22 guess, are you an expert in the technical aspects of  
23 gaining access to an airline website?

24 A So you've used the word "airline website."  
25 Irrespective of the place where you go to get the

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1 produce content. I am familiar with how airlines  
2 determine how they wish to have their content  
3 distributed.

4 BY MS. GIERHART:

5 Q Is that how you are defining "authorized  
6 access"?

7 MR. KASNER: Object to the form.

8 THE WITNESS: "Authorized access" is whose  
9 authority? It's a difficult thing to define. I don't  
10 wish to be difficult. I think the question of  
11 authorization depends on what product and services  
12 because there is so much information that is publicly  
13 available.

14 BY MS. GIERHART:

15 Q Can you explain what you mean by that.

16 A Sure. If I, as a consumer, or you, as a  
17 consumer, wish to have access to airline content, I can  
18 go look for content on the Web from a wide variety of  
19 resources be that Google, who is probably the ultimate  
20 screen scraper, to a travel agency, an OTA, or a  
21 metasearch for the airline's own website.

22 Q And so, if it's publicly available, you are  
23 saying it's authorized access?

24 MR. KASNER: Object to the form. Calls for a  
25 legal conclusion.

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1 THE WITNESS: I don't think I'm authorized  
2 to -- that's a conclusion. I can say, technically,  
3 it's possible. Anybody can access pretty much any  
4 content today because the Web is so broad.

5 BY MS. GIERHART:

6 Q Well, I guess that's sort of my question.  
7 This report does not focus on -- or take an opinion on  
8 authorized versus unauthorized access; is that right?

9 A I was not asked to opine on that.

10 Q Okay. And for purposes of this report, are  
11 you testifying regarding damage to an airline website?

12 MR. KASNER: Object to the form.

13 THE WITNESS: I don't think I'm qualified to  
14 talk about damage in a specific case. I can talk about  
15 damage to -- because I've actually been involved in how  
16 to build websites for airlines. So I'm familiar with  
17 the challenges that airlines face.

18 BY MS. GIERHART:

19 Q Okay. So what is the purpose of your report  
20 in relation to this litigation?

21 MR. KASNER: Object to the form.

22 THE WITNESS: I have been asked to opine on  
23 how the industry works and to provide some history --  
24 and it's contained in the report -- as to how airlines  
25 operate and have historically operated and currently

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1 THE WITNESS: It's generalist. So I've tried  
2 to provide, if you like, a way to look at the claims  
3 and the counterclaims in connection with the case so  
4 that you can have a good view of how the industry  
5 worked -- works -- excuse me -- how the industry works.

6 So I assessed the claims and have given you  
7 answers inside the document as to how I believe those  
8 claims and the counterclaims sit. So those are  
9 contained in each one of the points within the report.

10 BY MS. GIERHART:

11 Q So there's no -- you don't provide an opinion  
12 regarding whether -- regarding unauthorized access of  
13 an airline website?

14 MR. KASNER: Object to the form.

15 THE WITNESS: I think by the framework of the  
16 report is to assess the claims in the context with the  
17 industry as a whole. So I did look at, obviously, the  
18 individual claims, and I did look at how I felt the  
19 context was and opined accordingly.

20 BY MS. GIERHART:

21 Q Okay. So your report is not directed at any  
22 specific claim or counterclaim?

23 A It's just --

24 MR. KASNER: Object to the form.

25 THE WITNESS: Sorry. It's to assess the

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1 operate in the pre- and post-Internet world with the  
2 access to their content/product.

3 BY MS. GIERHART:

4 Q Okay. I guess, since we are on page 4, if you  
5 scroll up to the paragraph right above 1.1, it says  
6 "The purpose of this Report is to assess the claims,  
7 allegations, and information provided in connection  
8 with the pending litigation named above."

9 Do you assess the claims in your report?

10 MR. KASNER: Object to the form.

11 THE WITNESS: I provide the -- I've assessed  
12 the claims and provide the context for the  
13 conversation. So the information provided is in  
14 connection with that.

15 BY MS. GIERHART:

16 Q Did you review the complaint in preparing this  
17 report?

18 A I did.

19 Q Did you review the defendants' counterclaims?

20 A I did.

21 Q Did you read them both in full?

22 A I did.

23 Q Which claims or counterclaims does your report  
24 relate to?

25 MR. KASNER: Object to the form.

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1 claims. So, yes, I did look at the specific claims.

2 BY MS. GIERHART:

3 Q Right. But I said it's not meant to address  
4 one particular claim or counterclaim?

5 A I think that the way you -- I wrote the report  
6 was to look at the claims in their context. I can  
7 opine on those. I obviously can't opine on the  
8 legality of that. That's not my area or scope of  
9 expertise. But from the technical and the commercial  
10 side of how they operate, that's contained in the  
11 report.

12 Q Is Appendix C everything that you considered  
13 in writing your report?

14 A Can you remind me what Appendix C is because I  
15 only have -- one second.

16 Q If you --

17 MR. KASNER: Can you direct us to a page,  
18 Cindy?

19 THE WITNESS: Yes. Sorry.

20 BY MS. GIERHART:

21 Q Either -- you can either look at the table of  
22 contents on page 3 or go to the actual Appendix C,  
23 which starts on page 34.

24 A Okay. Let me look -- if you don't mind, I'll  
25 look at page 34. All right?

1 side, the airline can hide information that could be  
2 pertinent to the customer.

3 BY MS. GIERHART:

4 Q Meaning, like, what?

5 MR. KASNER: Object to the form.

6 THE WITNESS: He might not tell the customer  
7 in other than the fine print where to find a way to,  
8 for example, opt out of insurance, just for example.

9 BY MS. GIERHART:

10 Q So is that any different from OTAs?

11 A I think -- I think it is.

12 Q In what way?

13 A I think it's a question of perspective. The  
14 airline wants to keep its costs as low as possible.  
15 The OTA is more related to how I can build a  
16 relationship with a customer long term so I can sell  
17 him not just the airline ticket itself but also  
18 ancillary services such as hotels and cars, et cetera.

19 Q Are you saying airlines aren't interested in  
20 repeat customers?

21 MR. KASNER: Object to the form.

22 THE WITNESS: That's not what I'm saying.  
23 I'm saying that the ability for an airline to sell a  
24 product to the customer is one thing. If the customer  
25 is going via an OTA, the customer is more likely to be

1 Q Oh.

2 A I can't navigate when you are displaying.

3 Q Yep. Yep. Go ahead. Okay. So we are going  
4 to go to page -- page 7 --

5 A Okay.

6 Q -- Section 4.2. So -- so, now, we are talking  
7 about, well, still pre-Internet era. Actually, we'll  
8 go back to it because we kind of jumped around a  
9 little. But the third paragraph, you know, you were  
10 talking about indirect distribution.

11 The second sentence there, "Indirect  
12 distribution peaked during this period -- in about  
13 1995, travel-agency distribution made up approximately  
14 70% of all ticket sales," I was just wondering where  
15 that percentage came from. There's no citation.

16 A No, because I couldn't find one. But I'm  
17 familiar with the situation because 1995 was a, sort  
18 of, seminal year. This is when Delta Air Lines first  
19 introduced commission capping to travel agencies.  
20 That's why it's kind of known as a well-known year.  
21 Seventy percent of all ticket sales was airline ticket  
22 sales that went through either indirect channels or  
23 direct channels, which is via the airline direct.

24 Q And that's just a percentage you -- is that a  
25 guess?

1 thinking about the holistic nature of the trip, not  
2 just the airline ticket such as how to deal with "I'm  
3 not going just from" -- you guys are in New York;  
4 right? -- "just going from New York to San Francisco.  
5 I'm going from New York to San Francisco, and I need to  
6 have a hotel, and I need to figure out transportation  
7 to get from the airport to the place of my meeting."

8 The travel agent can provide more information  
9 and typically does so, provide more capability to buy a  
10 broader product set than a single airline does.

11 BY MS. GIERHART:

12 Q Typically, airlines nowadays, though, are  
13 offering hotel and rental car services also; is that  
14 right?

15 A Some airlines do, but I would say that when  
16 one looks at the percentage of hotels sold via an  
17 airline website versus a hotel sold connected to an  
18 airline ticket on an OTA, you'll see that the OTA sells  
19 vastly greater, more hotel bookings than the airline  
20 does on a per-unit basis.

21 Q Okay. I'm just going to scroll down the  
22 report a little to the next page. So we are at --

23 A Do you mind if -- do you mind if we go back to  
24 the previous form where I can look? because I can  
25 look at either side of the page.

1 A I could not find a good citation for this. It  
2 is some -- let's put it as a knowledgeable guesstimate.

3 Q Okay. I guess, similarly, if you -- two  
4 paragraphs down, there's another percentage there. You  
5 are talking about the indirect channel aggregated  
6 behind four major GDS players who, by 1995, had  
7 captured over 98 percent of the licensed travel agents  
8 in the USA.

9 Is that also just your estimate?

10 A Yes. Again, pretty much, I know that to be  
11 the case because the figures came from ARC, but I  
12 couldn't go as far back as 1998 on their website.

13 Q From where was it? AR -- ARC?

14 A ARC publishes a percentage of travel agencies  
15 who are licensed, who are using the GDS systems.

16 Q Did you say "ARC"?

17 A Yes. Airlines Reporting Corporation, ARC,  
18 Alpha Romeo Kappa -- sorry -- Control.

19 Q Okay. Do you know -- you mentioned this is in  
20 the U.S. Do you know whether this was -- there were  
21 similar percentages in Europe at this time?

22 A They are different, and I can't quote details.  
23 There are figures that we could go with, but my focus  
24 was on the USA market. So, no, I did not look at the  
25 actual numbers for the rest of the world. I know the



1 functions and the services and how to get to the data.  
 2 Q Okay. Just to clarify, you said they are  
 3 different. Would it -- I don't need exact percentages,  
 4 but would it just -- would it be less in Europe?

5 The GDS players captured less of a percentage  
 6 of the market?

7 MR. KASNER: Object to the form.

8 THE WITNESS: I think it's a little off topic,  
 9 but the definition of "licensed" is the licensing  
 10 system is done by an organization called "BSP" or  
 11 "Bank Supplement Plan," and there's one for each  
 12 country or just minor groupings of countries. And  
 13 that's controlled by IATA, I-A-T-A, which is the  
 14 airlines' international consortia, and they license  
 15 travel agents to issue neutral tickets when these were  
 16 still paper tickets in those days.

17 So the percentage of tickets issued varies by  
 18 each country, and it can be very different for each  
 19 country. Therefore, I wouldn't like to speculate to  
 20 say that that's a generic term. It just varies by  
 21 country because of the different parameters of what  
 22 goes on in a country.

23 BY MS. GIERHART:

24 Q Okay. And since 98 percent is either your  
 25 recollection or a guess, how confident are you in that

1 ticket, these tickets -- and they are stamped with ARC  
 2 on them. Airlines Reporting Corporation is stamped on  
 3 the ticket. The only way you can do that is if you are  
 4 recognized and licensed by ARC.

5 If you can recall, earlier in my testimony, I  
 6 explained that I was the ticketing agent specialist for  
 7 Expedia when it got its travel agency license, and that  
 8 travel agency license is this thing that we are talking  
 9 about.

10 Q And is it different in the post-Internet era,  
 11 this ARC licensing of travel agents?

12 MR. KASNER: Object to the form.

13 THE WITNESS: The basic structure and the idea  
 14 for the participating airlines has not changed. In  
 15 other words, in order for a travel agency to issue a  
 16 participating airline's ticket, they must do so using  
 17 the ARC stock and must be licensed by ARC.

18 BY MS. GIERHART:

19 Q I assume all OTAs -- well, let me ask one more  
 20 question.

21 Is this -- when you are issuing a  
 22 participating ARC license ticket, are we only referring  
 23 to paper tickets?

24 A No.

25 Q Okay. Nowadays, you could have a, sort of,

1 percentage?

2 MR. KASNER: Object to the form.

3 THE WITNESS: For the United States, for the  
 4 licensed travel agents, that's licensed, meaning those  
 5 who are authorized to issue tickets, I believe this to  
 6 be a good number.

7 BY MS. GIERHART:

8 Q And when you say "licensed and authorized to  
 9 issue tickets," licensed by who?

10 A I think I've already said this. It was ARC,  
 11 Airlines Reporting Corporation. They are the licensing  
 12 body for issuing of neutral tickets in the  
 13 United States.

14 Q And I apologize if you did already explain  
 15 this. What are neutral tickets?

16 A That is a ticket that is issued in the same  
 17 form on the same stock. They used to be paper in 1995  
 18 so that the tickets themselves, the blank tickets, were  
 19 known as "ticket stock," and you could use exactly the  
 20 same stock to issue a ticket on any participating  
 21 airline.

22 Q Did travel agencies back in this pre-Internet  
 23 era have to be licensed in order to sell airline  
 24 tickets by the ARC?

25 A The only way that you could issue a neutral

1 licensed electronic ticket?

2 A They banned electronic tickets around about  
 3 2002, I believe. So there are no more paper tickets.

4 Q You said they banned -- who banned electronic  
 5 tickets in 2002?

6 A The airlines through ARC ended the practice of  
 7 the issue -- issuing of paper tickets.

8 Q Okay. They ended paper tickets in 2002.

9 A I'm sorry. Let me just correct that. I don't  
 10 remember the exact date, but it was sometime around  
 11 2002 that paper -- excuse me -- that paper tickets no  
 12 longer were eligible to be used.

13 Q So, I guess, can you just explain. Nowadays,  
 14 I mean, how many OTAs are licensed through ARC?

15 A I don't have those numbers, and I can't say  
 16 for sure. I can speculate an answer.

17 Q Sure. Just to give us an idea.

18 A I believe that all of the major OTAs are  
 19 licensed to issue tickets if they have a physical --  
 20 sorry -- a legal footprint in the United States; that  
 21 is, they have the ability to operate in the  
 22 United States and issue -- U.S. airlines or those  
 23 airlines who operate in the United States and sell  
 24 their products in the United States, I believe all of  
 25 the major players are, in fact, licensed by ARC.

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1 the same as what a conventional travel agency does.

2 You need to have this minimum information in  
3 order to make a reservation. Yes, that's true. You  
4 can then use that information and look -- when you  
5 combine that with, for example, the behavior of the  
6 customer. So you can get -- you do get personalization  
7 out of this. That's standard business.

8 BY MS. GIERHART:

9 Q Okay. And, then, your next sentence is that,  
10 as such, Ryanair is attempting to establish itself as a  
11 competitor of online travel agencies.

12 Is it your contention that Ryanair is trying  
13 to establish itself as a competitor because it collects  
14 the name, the date of birth, and contact information of  
15 its customers?

16 MR. KASNER: Object to the form. It's one of  
17 the things that Ryanair does. Ryanair wants to provide  
18 the same level of service as an OTA does because, you  
19 know, we've gone through this at great length, looking  
20 at comparing OTAs and direct airlines, and I think  
21 Ryanair is trying to do the same. They want to be  
22 competitive with online travel agencies in gathering  
23 the customers' eyeballs.

24 BY MS. GIERHART:

25 Q You are saying they have the same business

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1 than what's here in the report?

2 A Sorry. Ask the question again.

3 Q Is there anything else that supports your  
4 contention that Ryanair is attempting to establish  
5 itself as a competitor of OTAs other than what you have  
6 here in the report, which is that they are both  
7 targeting customers?

8 MR. KASNER: Object to the form.

9 THE WITNESS: That is a very broad way that  
10 Ryanair and OTAs are competitive, and they both  
11 consider each other to be competitive. So, in my  
12 report, I've tried to demonstrate how you get to that  
13 point with what is the behavior of an airline, what is  
14 the behavior of intermediaries be they GDS or OTAs or  
15 other forms, and what is the behavior of the customer.

16 So, as a broad brush, I tried to give that --  
17 the answer to that information so that, inside the  
18 report, I tried to give a way that describes how  
19 Ryanair behaves, and that's very similar to how an OTA  
20 behaves, which is what's good.

21 MR. KASNER: I think we are at time. So, if  
22 we could just wrap this up, that would be great.

23 MS. GIERHART: Right. No. Yeah. I think --  
24 I think I'm -- we are at time. So I think I'm done.

25 MR. KASNER: Okay.

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1 model, which is to collect information about customers  
2 and then target marketing to them; right?

3 MR. KASNER: Object to the form.

4 THE WITNESS: That is one of the things they  
5 do, yes.

6 BY MS. GIERHART:

7 Q Isn't that what essentially every company that  
8 markets to consumers today does?

9 MR. KASNER: Object to the form.

10 THE WITNESS: That's no different. You are  
11 absolutely correct.

12 BY MS. GIERHART:

13 Q So is -- wouldn't that make every company a  
14 competitor of OTAs?

15 MR. KASNER: Object to the form.

16 THE WITNESS: Let's put it this way: Amazon  
17 today -- touch wood -- does not sell travel on  
18 Amazon.com. So I think the context of this is very  
19 important. You can't do a search from Dublin to  
20 Stansted on Amazon.com. You can on an OTA, and you can  
21 on Ryanair.com. So I think the context is very  
22 important.

23 BY MS. GIERHART:

24 Q Okay. Is there anything else supporting your  
25 contention that Ryanair is a competitor with OTAs other

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1 THE WITNESS: Okay.

2 MS. GIERHART: Did you have any questions, or  
3 are we done?

4 MR. KASNER: We do not have any questions.  
5 We would like to designate the transcript for this as  
6 highly confidential pursuant to the protective order.

7 THE VIDEOGRAPHER: Joanna, do you want copy  
8 orders on the record?

9 THE REPORTER: Yes, please. Does anyone need  
10 a copy of the transcript today?

11 MS. GIERHART: Yes. We'll -- e-tran only. We  
12 don't need paper copies, and if we can, get the rough  
13 and expedited.

14 MR. KASNER: The same for us would be great.

15 THE REPORTER: Thank you.

16 THE VIDEOGRAPHER: All right. This concludes  
17 the deposition on September 26, 2023, at 5:24 p.m.

18 (Deposition session concluded at 5:24 p.m.)

19 -oOo-



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I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed at \_\_\_\_\_ on \_\_\_\_\_.  
(Place) (Date)

\_\_\_\_\_  
(Signature of Deponent)

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DEPOSITION OFFICER'S CERTIFICATE  
STATE OF CALIFORNIA )  
) ss.

COUNTY OF ORANGE )

I, Joanna B. Brown, hereby certify:

I am a duly qualified Certified Shorthand Reporter in the State of California, holder of Certificate Number CSR 8570 issued by the Court Reporters Board of California and which is in full force and effect. (Fed. R. Civ. P. 28(a)).

I am authorized to administer oaths or affirmations pursuant to California Code of Civil Procedure, Section 2093(b) and prior to being examined, the witness was first duly sworn by me. (Fed R. Civ. P. 28(a), 30(f)(1)).

I am not a relative or employee or attorney or counsel of any of the parties, nor am I a relative or employee of such attorney or counsel, nor am I financially interested in this action. (Fed R. Civ. P. 28).

I am the deposition officer that stenographically recorded the testimony in the foregoing deposition, and the foregoing transcript is a true record of the testimony given by the witness. (Fed. R. Civ. P. 30(f)(1)).

Page 292

Before completion of the deposition, review of the transcript [ ] was [ ] was not requested. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed, are appended hereto. (Fed. R. Civ. P. 30(e)).

Dated: \_\_\_\_\_

DEPOSITION OF: TIMOTHY JAMES O'NEIL-DUNNE

DATE OF DEPOSITION: Tuesday, September 26, 2023

CASE: *Ryanair DAC v. Booking Holdings Inc., et al*, Case No. 20-1191-WCB**ERRATA SHEET**

The following are the corrections which I have made to my deposition transcript:

<b>Pg.</b>	<b>Ln.</b>	<b>Now Reads</b>	<b>Should Read</b>	<b>Reason</b>
9	12	“(inaudible)”	gist	Transcription
21	21	pr?cis	précis	Transcription
25	14	buying	enabling	Correction
34	11	crew	credentialed	Transcription
58	18	airline	airline,	Transcription
65	19	serve	settle	Correction
81	2	electronic	paper	Correction
102	11	DDS's	GDSs'	Transcription
109	4	obstructed	abstracted	Transcription
112	12	bot	board	Transcription
113	17	Dog	dot	Transcription
141	10	educators	all comers	Transcription
148	9	part	path	Transcription
149	16	office	offers	Transcription
152	7	gain	against	Transcription
153	21	NDCs	NDC	Transcription
156	21	selling	sourcing	Transcription
158	17	agency or a regular brick...	agency or via a regular brick...	Transcription
160	16	Saudi	Saudia	Transcription

DEPOSITION OF: TIMOTHY JAMES O'NEIL-DUNNE

DATE OF DEPOSITION: Tuesday, September 26, 2023

CASE: *Ryanair DAC v. Booking Holdings Inc., et al*, Case No. 20-1191-WCB

Pg.	Ln.	Now Reads	Should Read	Reason
160	16	Saudi	Saudia	Transcription
161	21	indirect	direct	Transcription
167	19	reaching	reach and	Transcription
168	19	Flair,	Flair then,	Transcription
173	19	that	it	Transcription
179	13-14	“— like the”	“— like the – “	Transcription
190	20	airline's website	airlines' websites	Transcription
217	2	Sendai	Cendyne	Transcription
217	3	Sendai	Cendyne	Transcription
219	10	pausing	parsing	Transcription
219	25	pausing	parsing	Transcription
219	15	104	1040	Transcription
220	4	scraping/pausing	scraping/parsing	Transcription
220	21	light	flight	Transcription
223	5	pausing	parsing	Transcription
230	11	DDOS	DDoS	Transcription
232	8	earlier line	Value Alliance	Transcription
232	22	ValueAirlines.com	www.ValueAlliance.com	Transcription
238	19	DDS	DDoS	Transcription
241	6	DDOS	DDoS	Transcription
243	12	DDOS	DDoS	Transcription
244	23	DDOS	DDoS	Transcription

DEPOSITION OF: TIMOTHY JAMES O'NEIL-DUNNE

DATE OF DEPOSITION: Tuesday, September 26, 2023

CASE: *Ryanair DAC v. Booking Holdings Inc., et al*, Case No. 20-1191-WCB

Pg.	Ln.	Now Reads	Should Read	Reason
260	19	customer's water	customer is like water	Transcription
261	21	FAA	2FA	Transcription
267	21	pr?cis	précis	Transcription
277	24	DDOS	DDoS	Transcription
286	16	form. It's one	form." [Insert new line] "THE WITNESS: It's...	Transcription. The transcript improperly combines Mr. Kasner's objection with The Witness's answer
293	Index	DDOS	DDoS	Transcription
307	index	DDS's	GDSs'	Transcription
307	Index	DDS	DDoS	Transcription
307	Index	DDOS	DDoS	Transcription
331	Index	pausing	parsing	Transcription
334	Index	pr?cis	précis	Index should be corrected to reflect "précis"
340	Index	scraping/pausing	scraping/parsing	Transcription

I, the undersigned, declare under penalty of perjury, that I have read the above-referenced deposition transcript and have made any corrections, additions or deletions reflecting my true and correct testimony.

EXECUTED this 15 day of November 2023, at 10:15 P<.

Timothy James O'Neil-Dunne  
Timothy James O'Neil-Dunne

# EXHIBIT 35

**PUBLIC VERSION - CONFIDENTIAL MATERIAL OMITTED**



Expert Report of Jordan Rae Kelly, prepared in connection with *Ryanair DAC v. Booking Holdings Inc. et al.*, C.A. No. 20-01191-WCB (D. Del.).

August 31, 2023



An Intelligence-Led, Expert-Driven, Strategic Approach to  
Global Cybersecurity Challenges

***Contains Material for Attorneys' Eyes Only Pursuant to the Protective Order***

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## **Introduction**

I, Jordan Rae Kelly, am a Senior Managing Director and Head of Cybersecurity for the Americas at FTI Consulting, Inc. ("FTI"). I have been retained by Defendants Booking Holdings, Inc., in connection with Ryanair DAC v. Booking Holdings Inc., C. A. 20-1191-WCB (D. Del.).

Except as otherwise noted, I have personal knowledge as to all the information set forth in this report. All facts and opinions included in this report are based upon my personal experiences and knowledge, information supplied to me by Counsel, my review of other relevant information related to each of Ryanair's claims, my extensive knowledge of criminal and national security threats, and top-level cybersecurity experience.

## **Personal Background and Qualifications**

I am a Senior Managing Director and the Head of FTI's Cybersecurity for the Americas practice. I have more than 15 years of experience coordinating incident response and managing cyber policy planning. Prior to joining FTI Consulting, I served as the Director for Cyber Incident Response on the National Security Council at the White House. During my tenure there, I was responsible for both national incident response coordination, as well as management of the U.S. Government's process for managing zero-day exploits. I was also a chief author of the National Cyber Strategy, the first of its kind in the United States in 15 years.

Before joining the National Security Council in 2017, I served as Chief of Staff and Chief of Strategic Initiatives in the Federal Bureau of Investigation's ("FBI") Cyber Division, where I managed daily operations and strategic and policy planning for the FBI's national cyber program. I hold a bachelor's degree from Wake Forest University and a Juris Doctorate from the University of Tennessee College of Law. A complete copy of my Curriculum Vitae, which further describes my background, is attached as Appendix A.

I have been assisted by professionals from FTI, who worked under my direction on this engagement. The fees paid to FTI are not contingent on the outcome of this matter or the opinions expressed herein. My billing rate for this matter is \$1,140 per hour. I reserve the right to supplement, update, or otherwise modify my opinions and my report. The opinions offered in this report should not be construed as legal opinions.

## **Materials Considered**

The documents on which I<sup>1</sup> relied in forming my opinions are cited in my report. A full list of the documents I considered is attached as Appendix B. Should I learn of additional

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<sup>1</sup> Some of the work described in this report was performed by members of my team at my direction. I have used the pronoun "I" throughout this report to describe both the work that I did myself and the work that my colleagues performed at my direction.

information relevant to my opinions set forth below, I reserve the right to supplement or revise this report and/or the list of materials considered in Appendix B.

## Details of Analysis

### Summary:

On or about July 22, 2022, Ryanair DAC (“Ryanair” or “Plaintiff”) filed a complaint against Defendants<sup>2</sup> alleging violation of various aspects of 18 USC § 1030, the Computer Fraud and Abuse Act (“CFAA”).<sup>3</sup> Plaintiffs claim that Defendants’ efforts to purchase Ryanair flights on behalf of their customers is both a violation of Plaintiffs’ Terms of Use (TOU)<sup>4</sup> and a violation of numerous counts of the CFAA.<sup>5</sup> Defendants argue that Ryanair operates a public website, freely and openly available to anyone with an Internet connection, and that Defendants’ efforts are neither malicious nor a violation of the CFAA. Defendants engaged FTI to review Ryanair’s allegations and to conduct an analysis of any technological implementations present on Ryanair’s website<sup>6</sup> as it pertains to the CFAA.

The findings below reflect a technical, non-legal analysis in response to Ryanair’s allegations of Defendants’ violation of various aspects of the CFAA. The U.S. Supreme Court uses a “gates-up-or-down inquiry”<sup>7</sup> to analyze whether a computer system was accessed in violation of the CFAA, and as such this report follows a similar path. I conducted a review of the information available to me at the time of this report to opine on the technical and technological allegations underpinning Ryanair’s CFAA theory. I considered the purpose and availability of the Ryanair website, technological documentation provided by Ryanair on deployed technical solutions, such as “SHIELD,” and supporting technical evidence (i.e. logs), or lack thereof, provided by Ryanair to support Ryanair’s alleged attribution of harm to Defendants.

As a result of my analysis and examination of the materials provided, I have reached the following opinions:

1. **Opinion 1:** The Ryanair website is publicly available, to which there is no barrier to access. Anyone with an Internet connection can access the website.
2. **Opinion 2:** Ryanair necessarily granted access to its website in order for any flight purchases to have been made.

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<sup>2</sup> For the purpose of this report, Defendants includes Booking Holdings, Inc., Booking.com B.V., Kayak Software Corporation, Priceline.com, LLC, and Agoda Company PTE. LTD, as outlined in 2022-07-22 D076 First Amended Complaint.pdf

<sup>3</sup> 2022-07-22 D076 First Amended Complaint.pdf

<sup>4</sup> <https://www.ryanair.com/us/en/corporate/terms-of-use>

<sup>5</sup> 2022-07-22 D076 First Amended Complaint.pdf

<sup>6</sup> Unless specified otherwise, “Ryanair website” includes “myRyanair.”

<sup>7</sup> *Van Buren v. United States*, 141 S. Ct. 1648, 1659-60 (2021).



3. **Opinion 3:** There is no documentation or evidence that any of the Defendants caused harm to the Ryanair website.

The following report provides my opinions based up on my review of the facts and materials of this case to date, along with my education, training, experience, and credentials. I reserve the right to enhance, expand, or limit these opinions based upon yet unseen materials and information and any other documents produced in this matter. In particular, I reserve the right to enhance, expand, or limit these opinions based on additional depositions and document discovery, and the anticipated report of Plaintiff's expert witness, which I have not reviewed. All opinions expressed in this report are expressed to a reasonable degree of professional certainty and are based on my more than 15 years of experience in the cybersecurity industry coordinating incident response and providing cybersecurity counsel and expertise.

### **Opinions:**

It is my professional opinion, based on the information available to me as of the date of this report, that Ryanair operated a public website, freely open to anyone with an Internet connection, and therefore presented no "gates" to access. The implementation of a technical solution such as SHIELD is backwards-looking, and therefore cannot be considered a barrier to access within the cybersecurity context—a user has already accessed the website before the user is identified by SHIELD, and no "authorization" is required to access the website. These two key points aside, Ryanair provided insufficient technical documentation to substantiate its attribution of harm to Defendants. Consequently, I find that from a technical perspective, Defendants did not bypass any technological barrier, and Plaintiffs could not technically attribute the alleged Ryanair website harm to Defendants.

### **1. Opinion 1: The Ryanair website is publicly available, to which there is no barrier to access. Anyone with an Internet connection can access the website.**

Depending on a website's purpose and resulting configuration, it can be categorized as either "public" or "private," meaning, respectively, open to all visitors or restricted to a select pool of visitors. Categorization as the latter requires technical configurations designed to limit or otherwise prevent public access, and a natural corollary inquiry is what, if anything, is actually being protected by the technical configurations in place on the website. As such, "Opinion 1" reviews and analyzes the Ryanair website against the concepts of a public and private web server, the implementation of access limitation through industry standard principles of Authorization, Authentication, and Accounting (AAA), the purpose of the website in relation to Defendants' activities, and the type of information protected within "myRyanair." Each of these factors influenced my opinion that Ryanair.com is a publicly available website, and the myRyanair login, which requires only a working email and a user-created password, does not constitute a "private" website.

### 1.1 Purpose

At its most basic description, the Ryanair website was created so that public users could purchase Ryanair flights. The purpose of the Ryanair website is best explained by David O’Callaghan, Head of Software Development for Ryanair, during his August 15, 2023 deposition (“O’Callaghan Deposition”). According to Mr. O’Callaghan, “the purpose of Ryanair’s website [is]...to interact with our customers. So, to allow us to sell our fares, to allow users to check in, for us to be able to sell various products to our end users.”<sup>8</sup> According to the Cambridge Dictionary, “public” is defined as “relating to or involving people in general, rather than being limited to a particular group of people.”<sup>9</sup> The very definition of “public,” coupled with Mr. O’Callaghan’s explicit description of the purpose of the Ryanair website, indicates that the Ryanair website is a publicly available resource and therefore not designed to inhibit who is viewing the website and purchasing flights.

In preparing this report, my colleagues and I have spent considerable time reviewing and interacting with the Ryanair website. Consistent with Mr. O’Callaghan’s description, interacting with the Ryanair website likewise demonstrates that it is a public resource and there is no barrier to access, despite claims by Ryanair to the contrary, as detailed in the remainder of this opinion.

### 1.2 Web Servers: Public vs. Private

SANS<sup>10</sup> defines a web server as “[a] software process that runs on a host computer connected to the Internet to respond to HTTP requests for documents from client web browsers.”<sup>11</sup> Said another way, HTTP, or *Hypertext Transfer Protocol*, is the mutual understanding for web browsers to ask for, and web servers to deliver on, requests for content over a network.

Users of the Internet visit web servers nearly every day in widely varying capacities from, for example, reading news highlights on the AP News website to accessing judiciary resources on the US Courts’ intranet. While in both scenarios a web server delivers content over the network, the former is public and the latter is not.

Public web servers offer their content to the Internet at large. Anyone or anything with a web browser can access the content, to include the now-omnipresent non-human AI assistant bots—Alexa, Siri, and Google Assistant—that make requests on humans’ behalf. Private servers, however, do not give approval, permission, or empowerment for anyone or

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<sup>8</sup> DAY 01 081523 (Deposition of David O’Callaghan) – MASON HAYES & CURRAN DEPOSITION, Page 99, Lines 1-5.

<sup>9</sup> <https://dictionary.cambridge.org/dictionary/english/public>

<sup>10</sup> The SANS Institute has built a strong reputation for decades as providing cutting edge cybersecurity research, education, and certifications. Their faculty is composed of renowned experts in the field.

<sup>11</sup> <https://www.sans.org/security-resources/glossary-of-terms/>

anything to access the content. Private servers implement authorization limitations (in other words, limit authorized access) through explicit access control.

For example, consider the web page for California's Office of Emergency Services ("Cal OES"), "<http://www.caloes.ca.gov>." The web page offers the public information on preparedness, including preparation advice for droughts, earthquakes, fires, and floods. In addition, however, clicking "employee login" at the bottom leads to links to other servers<sup>12</sup> where only employees can access manuals, use webmail, and file service reports. These areas of the site, requiring a username issued by Cal OES and a password assigned to that login to proceed, are not intended for broader public access. Access to this site is controlled by a network administrator, and user credentials are only issued to legitimate employees in line with AAA principles, described below. In the case of Cal OES, an unauthorized person is not able to access the restricted portion of Cal OES' website by simply creating an account with any email and password. Instead, the user must be explicitly identified and then granted access and login credentials, issued by Cal OES' IT personnel.

Ryanair.com, and by extension myRyanair, is available for viewing and accessing by any user seeking, directly or indirectly, to fly Ryanair,<sup>13</sup> and it is a publicly available website as discussed above. As stated in the August 16, 2023 Deposition of Ryanair Chief Technology Officer John Hurley ("Hurley Deposition"), "Everybody who's got access to a computer can browse our website and get the fares."<sup>14</sup>

The site [www.ryanair.com](http://www.ryanair.com) is available to the public via any web browser such as "Chrome" or "Firefox", or via non-browser based HTTP request methods, to include, for example, Amazon Alexa's "My Ryanair skill."<sup>15</sup> It is also publicly accessible through the use of a computer's text based command line functionality, as demonstrated below:

---

<sup>12</sup> <https://www.caloes.ca.gov/cal-oes/employee-login/>;  
<https://w3.calema.ca.gov/CTD/Secure/oesintranet.nsf/index>.

<sup>13</sup> DAY 01 081523 (Deposition of David O'Callaghan) – MASON HAYES & CURRAN DEPOSITION, Page 99, Lines 1-5.

<sup>14</sup> DAY 02 081623 (Deposition of John Hurley) – MASON HAYES & CURRAN DEPOSITION, Page 12, Lines 23-24.

<sup>15</sup> <https://www.amazon.co.uk/Cation-Dynamics-Ltd-My-Ryanair/dp/B074CQT8PX>

[illegible]

Figure 1: Command Line Interface output from executing the command: `curl -L https://www.ryanair.com`

A third [REDACTED] access method, [REDACTED] are discussed in greater detail in this report's second finding.

### 1.3 Authorization and Authentication Principles

Authorization is one of the core tenants of the Authentication, Authorization, and Accounting (“AAA”) cyber security framework (CSF). The AAA framework is a fundamental building block of the cybersecurity discipline that helps practitioners frame the connected concepts of controlling access to computer resources, enforcing policies, and auditing usage. As such, the AAA framework “plays a major role in network management and cybersecurity by screening users and keeping track of their activity while they are connected” to the Internet.<sup>16</sup> The SANS Institute, a leading, trusted cybersecurity knowledge base, defines authorization in particular as “the approval, permission, or empowerment for someone or something to do something.”<sup>17</sup> At its most basic level, Authorization dictates what a user is affirmatively allowed (or “authorized”) to do with a given resource, implemented through technical permissions established by a network administrator. Authentication is the “process of confirming the correctness of the claimed identity.”<sup>18</sup> Authentication is an ongoing process, wherein a user’s identity is validated through a variety of technical mechanisms to ensure the correct entity is accessing the resource. So, in short: *while authorization governs permission, authentication validates the identity of the entity claiming permission.*

<sup>16</sup> Fortinet, Inc., What is Authentication, Authorization, and Accounting (AAA)?, 2023, <https://www.fortinet.com/resources/cyberglossary/aaa-security>

<sup>17</sup> <https://www.sans.org/security-resources/glossary-of-terms/>

<sup>18</sup> <https://www.sans.org/security-resources/glossary-of-terms/>

**1.4 Ryanair has a public website—Ryanair.com—as to which no authorization is required. Ryanair also has private websites to which authorized access is controlled.**

Similar to the above example of the Cal OES employee-only portion of the website, Ryanair offers an employee-only training portal located at <https://training.ryanair.com/topclass/login.do>. [REDACTED]

[REDACTED].<sup>19</sup> As evidenced by the following screenshots, there is no mechanism by which a member of the public can simply “create an account” or request access. Additionally, in order to reset a password, an individual must input their Crew Code, otherwise the system will reject the request as unauthorized.

← → ↻ training.ryanair.com/topclass/login.do

**RYANAIR** | Log in ▼

Crew Code:

Password:

Access to internal systems within the Ryanair Group \* is necessary for the fulfillment of your duties. However, access to these systems is only permitted where it is required to fulfil your duties. You are not under any circumstances permitted to:

- Access and/or share information and/or personal data obtained from these systems with other colleagues unless there is a specific requirement to do so and only where that individual is also authorised to access this data;
- Distribute records and/or personal data from these systems or discuss them with any unauthorised personnel or any third-party external to Ryanair

Any breach of this addendum will result in disciplinary action, up to and including dismissal. All personal data collected and processed through the Topclass system is done in compliance with GDPR and all relevant data protection legislation.

Figure 2: Ryanair Training Portal, located at <https://training.ryanair.com/topclass/login.do>

<sup>19</sup> DAY 01 081523 (Deposition of David O’Callaghan) – MASON HAYES & CURRAN DEPOSITION, Page 167, Line 29 through Page 168, Line 5 and Page 169, Lines 5-10.



Crew Code:

Password:

Log in

Reset password

Access to internal systems within the Ryanair Group \* is necessary for the fulfillment of your duties. However, access to these systems is only permitted where it is required to fulfil your duties.

You are not under any circumstances permitted to:

- Access and/or share information and/or personal data obtained from these systems with other colleagues unless there is a specific requirement to do so and only where that individual is also authorised to access this data;
- Distribute records and/or personal data from these systems or discuss them with any unauthorised personnel or any third-party external to Ryanair

Any breach of this addendum will result in disciplinary action, up to and including dismissal.

All personal data collected and processed through the Tocplax system is done in compliance with GDPR and all relevant data protection legislation.

Figure 3: Screenshot of log-in portal and terms of use for Ryanair training portal, located at <https://training.ryanair.com/topclass/login.do>.

RYANAIR

Reset your password


Crew Code

Reset password☒

Reset PIN☒

Submit

Figure 4: Screenshot of "reset password" functionality on Ryanair training portal, located at <https://training.ryanair.com/topclass/resetPassword.do>.

RYANAIR

Reset your password

Crew Code

Reset password☒

Reset PIN☒

Submit

Figure 5: Example of random text entered into "Crew Code" field to reset password on Ryanair training portal, located at <https://training.ryanair.com/topclass/resetPassword.do>.

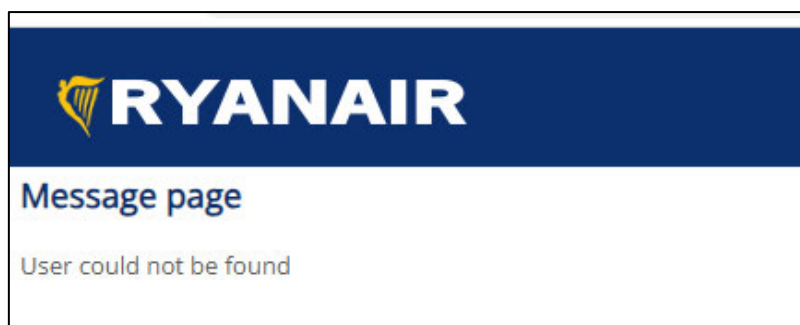


Figure 6: Error message - unrecognized user credentials. Password reset request unsuccessful, located at <https://training.ryanair.com/topclass/resetPassword.do>.

In the above example, Ryanair imposes a barrier to access the training material and other protected Ryanair information. Authorization occurs in Ryanair affirmatively validating a particular individual's status as a Ryanair employee prior to issuing a crew code and creating an account for the individual. Furthermore, the web server validates and authenticates the particular user attempting to exercise their authorization and ensure the user attempting to log-in is a verified Ryanair employee with a legitimate need to access the information. To reiterate from above: Authorization is about permission, Authentication is about validating identity. And both concepts—Authorization and Authentication—are in play when browsing to the Ryanair online training portal.

The Authorization and Authentication principles in play for the Ryanair training portal, an area Ryanair seeks to shield from public access, is in stark contrast to the openly accessible nature of the Ryanair website and the purchase page which nominally requires a user to create a myRyanair account, as discussed in the next section.

### **1.5 myRyanair's Email and Password Requirement Is Neither Authorization nor Authentication**

During the booking process—either after selecting a fare or immediately before securing the reservation—Ryanair requires the use of an email address and password to create an account to proceed and finalize the booking. This “myRyanair” account “gives you access to your Ryanair Wallet” and allows website visitors to save information for “faster” future bookings.<sup>20</sup> At what point during a visit to Ryanair.com this account creation occurs depends entirely on the visitor's preference, as account creation can be done optionally at various times. [REDACTED]

[REDACTED].<sup>21</sup> The only requirement is that eventually a user have (or create) a myRyanair account in order to purchase the flight, as shown in the below examples. In fact, according to Mr. O'Callaghan, the use of myRyanair is not required for browsing flights, managing bookings, or checking in. Mr. O'Callaghan

<sup>20</sup> <https://help.ryanair.com/hc/en-us/articles/12893759512337-Why-do-I-need-a-myRyanair-account->

<sup>21</sup> DAY 01 081523 (Deposition of David O'Callaghan) – MASON HAYES & CURRAN DEPOSITION, Page 120, Lines 2-20.

further notes that Ryanair has a mechanism where a customer can retrieve their booking through email and Passenger Name Record (PNR).<sup>22</sup>

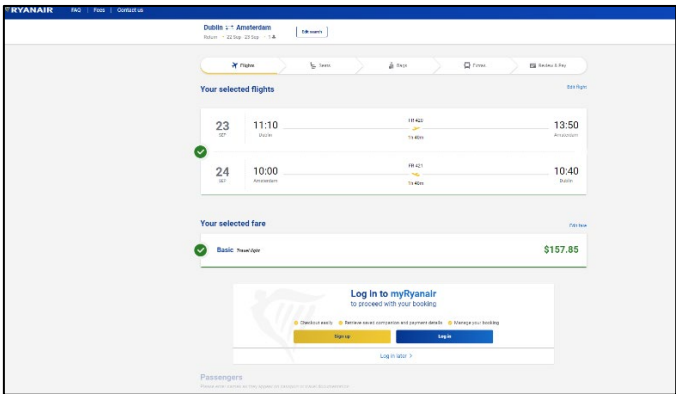


Figure 7: Ryanair Flight Selection - Option to "log in later" per customer preference. [www.ryanair.com/us/en](http://www.ryanair.com/us/en)

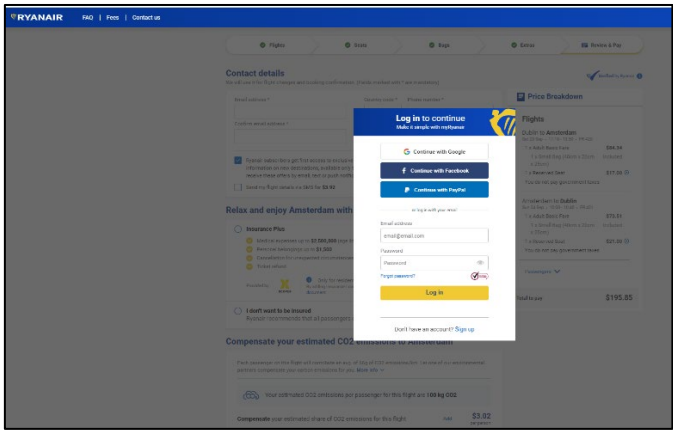


Figure 8: Ryanair Flight Purchase Screen - The customer is required to create a myRyanair prior to purchasing a flight. [www.ryanair.com/us/en](http://www.ryanair.com/us/en)

Unlike the Ryanair training portal example described above, where only an employee with an assigned Crew Code/user account can access the portal, Ryanair allows the use of any email address capable of even temporarily receiving email, so that it may receive a verification code to complete the account creation process. All users of the web have the ability to create email addresses thorough freely available email providers, such as “Gmail,” “Mail.com,” “AOL,” “Outlook,” “Yahoo” and more. In the Hurley deposition, Mr. Hurley describes the generally permissive nature of all emails because “we’re a commercial business, we need to sell fares, and we want the shop window to be open to as many people as possible.”<sup>23</sup> In fact, customers or entities can even use a temporary email—one that is available for use for only a brief period before becoming entirely unusable or unrecoverable again—to create an account and receive a verification code, in order to

<sup>22</sup> DAY 01 081523 (Deposition of David O’Callaghan) – MASON HAYES & CURRAN DEPOSITION, Page 228, Lines 10-26.

<sup>23</sup> DAY 02 081623 (Deposition of John Hurley) – MASON HAYES & CURRAN DEPOSITION, Page 30, Lines 12-14.

complete the booking process. One such example is provided below, using a temporary email generated by TempMail<sup>24</sup> and not tied to a particular person.

While Ryanair complains that Defendants use “fake” or “fictitious” emails and virtual payment methods for travelers on Ryanair, this report’s replicated testing shows that Ryanair takes no measures to stop an individual flyer directly visiting the Ryanair site from doing the same and yielding a successful booking regardless of their intention (personal or commercial). The emails used to book tickets are valid email addresses, they simply may not be email addresses belonging to the specific traveler. There is no technical device or system on the Ryanair website to determine whether the email address used to book a flight “belongs” to the specific traveler—or travelers in the case of multiple bookings. In other words, because a traveler can select and use any email address to book his or her ticket, the email address does not act as any form of technical check or identity verification, but is merely one additional step for the public to book a flight on the Ryanair website.

Testing by FTI revealed that a Ryanair flight can be booked on myRyanair utilizing a disposable temporary email address and an unattributed payment method through a gift card.<sup>25</sup> This same testing utilized a Virtual Private Network (VPN)<sup>26</sup> to mask the IP address making the booking, ensuring Internet identity and location was suitably masked. Further, the virtual Ryanair gift card used for payment was delivered to the temporary email address under a fictitious name, different from the name used for booking, and included a different phone number and billing address. Payment was successful and the flight was booked. A visual flow of this process is included below:

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<sup>24</sup> TempMail ([www.temp-mail.org/en/](http://www.temp-mail.org/en/)) is an online service that allows a user to create a temporary, throw-away email address. TempMail markets itself as a service to combat spam, advertising mailings, and other undesired emails. TempMail provides temporary, secure, anonymous, free, disposable email addresses.

<sup>25</sup> Of course, if the passenger name entered is inaccurate, this would pose other issues at the airport upon checking in, but is also not at issue by Ryanair, as Defendants pass through correct customer names.

<sup>26</sup> According to Cisco, a leader in Internet connected devices, a virtual private network, or VPN, “is an encrypted connection over the Internet from a device to a network. The encrypted connection helps ensure that sensitive data is safely transmitted. It prevents unauthorized people from eavesdropping on the traffic and allows the user to conduct work remotely.” <https://www.cisco.com/c/en/us/products/security/vpn-endpoint-security-clients/what-is-vpn.html>

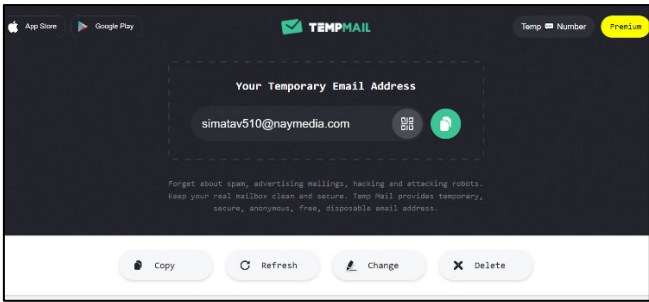


Figure 9: Creation of a Temporary Disposable Email Address. [www.temp-mail.org/en/](http://www.temp-mail.org/en/)

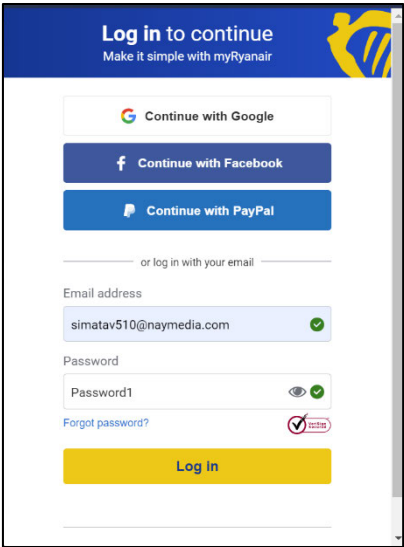


Figure 10: Creation of myRyanair Account Using Disposable Email Address. [www.ryanair.com/us/en](http://www.ryanair.com/us/en)

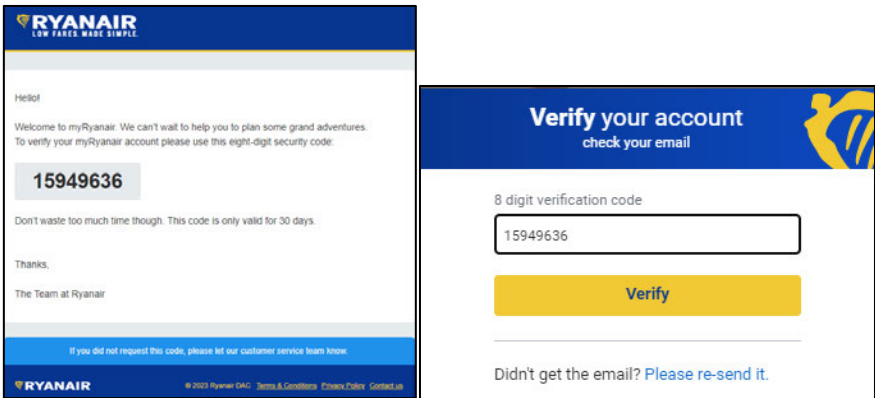


Figure 11: One-time-Code generated by Ryanair when creating or logging into myRyanair account from an unknown device. This code is sent to the customer's inputted email address. The customer, in turn, enter's this one-time-code into the "verify your account" prompt on Ryanair's website.



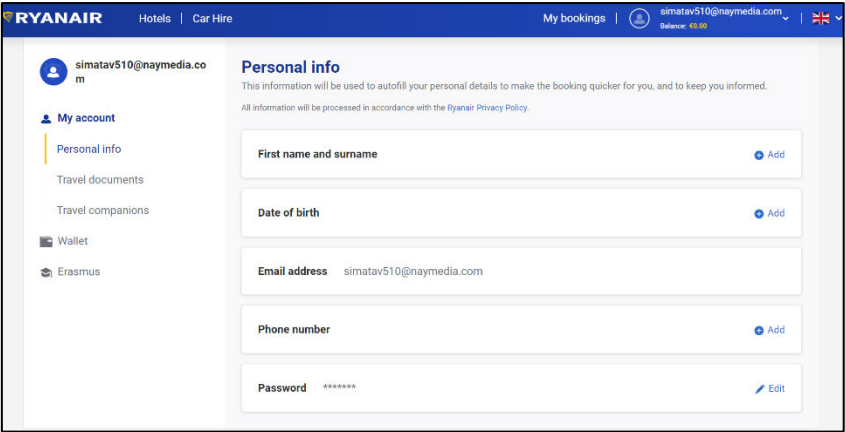


Figure 12: MyRyanair Account Personal Information Page. <https://www.ryanair.com/us/en/myryanair/personal-info>



Figure 13: Ryanair e-Gift Card with Fictitious Customer Information.

Price breakdown	
Jamie Simatav	
Copenhagen to Porto	
1 x Adult Basic Fare	477,94 Dkr
1 x Small Bag (40cm x 20cm x 25cm)	Included
1 x Reserved seats	75,00 Dkr
Porto to Copenhagen	
1 x Adult Basic Fare	402,16 Dkr
1 x Small Bag (40cm x 20cm x 25cm)	Included
1 x Reserved seats	75,00 Dkr
1 AUGUST 2023	
Payment method: Voucher	Paid 1 030,10 Dkr
Total paid 1 030,10 Dkr	
Total paid in card holders currency 138,24 €	

Figure14: Ryanair Flight Successfully Booked with Fictitious Name and Unattributed Payment Method.

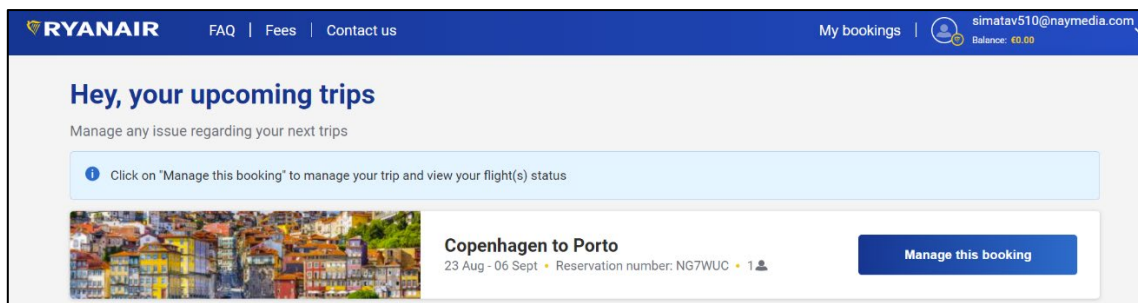


Figure 15: Flight Booking Details. <https://www.ryanair.com/us/en/trip/manage>

The replicated testing did not encounter any obstacles or technical limitations despite attempting to flag many hallmark signs of suspicious behavior, to include a temporary email, VPN, rotating IP, and virtual payment. Each leg of this process demonstrated lack of authentication of identity or account credentials, further validating the mechanisms in place at Ryanair are not designed to block or prevent anyone from booking a flight in this manner, and consequently, not a gate.

By analogy, imagine the person entering a public storefront, browsing the shop freely as expected, and when arriving at the counter to pay, instead of just exchanging a twenty-dollar bill for payment, the clerk first asks, “What is your telephone number?” The clerk does not care about the answer. The purchaser can make up any number desired, and no answer is wrong so long as a number is uttered, at which time the transaction completes with a receipt. Though the number was “necessary” to complete the purchase, it was devoid of authorization or authentication. The telephone number given had no bearing on what could or could not be viewed or purchased in the store nor by whom. This account creation step, while presented by Ryanair as a convenience measure to the customer, could be perceived by the rushed customer as a more irritating, unnecessary step and serves no legitimate purpose from a cybersecurity perspective.

Alternatively, if a client is so inclined, they can choose to create a myRyanair account utilizing their existing Google, Paypal, or Facebook credentials. In this scenario, myRyanair automatically creates a myRyanair account for the customer based on data sourced from the user’s Google, Paypal or Facebook account, to include name, contact information, and email address. Ryanair relies on Google, Paypal, and/or Facebook to authenticate and validate the user. However,

[REDACTED]

.27

<sup>27</sup> DAY 01 081523 (Deposition of David O’Callaghan) – MASON HAYES & CURRAN DEPOSITION, Page 132, Lines 24-28.

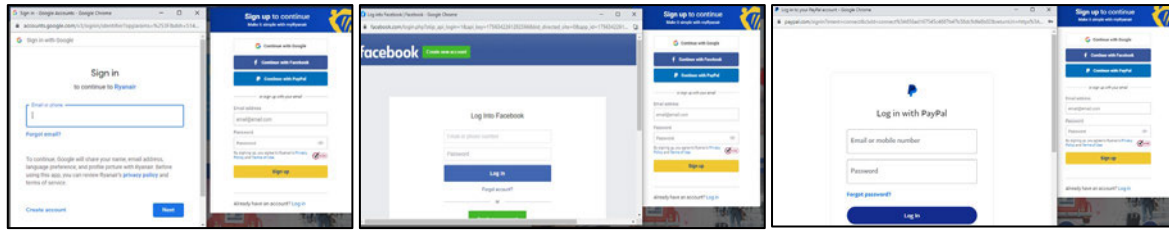


Figure 16: Screenshots of options to create or log-in to a myRyanair account utilizing Google, Facebook, or Paypal credentials. <https://www.ryanair.com/us/en>

In summation, despite Ryanair's claims to the contrary, the myRyanair account requirement is merely an added step in the booking process, but in no way serves to block, ban, or deter "who" or "what" is establishing an account. The fact that anyone with an email address or a Google, Paypal, or Facebook account can create a myRyanair account with no effort by Ryanair to authenticate or validate the identity of the user serves no legitimate purpose from a cybersecurity, network defense, data protection, or access control perspective.

### 1.6 No Sensitive Information for Protection

One important distinction between Ryanair's public website, including the myRyanair account offering, and a private web server is that Ryanair's public website is not in any way designed to protect sensitive information from public consumption. According to Mr. O'Callaghan, there is no confidential information on myRyanair that isn't explicitly entered by the user/account owner, which is then stored separately in a segregated database, described in more detail below. There is no sensitive information belonging to Ryanair.<sup>28</sup> The only information being protected by the myRyanair username/password is information entered into the system by the customer, such as name, email address, address, passport information, etc.

The account creation process described above does not affect authorization to Ryanair information, provide access to a sensitive segment of Ryanair's internal network, or otherwise segregate information as "off limits" to the public. To the contrary: all public visitors, even those entirely fabricated and ephemeral, may pursue this area of the website. When information is entered as a part of the myRyanair account creation, that entered information gets stored in a database, on a server not connected to the website, and has no bearing on the public's access to the myRyanair account creation page. One can think of this as a car proceeding down the highway, throwing a locked suitcase out the window while it is in motion and then continuing on. No one in the car is prevented or restricted in any way. Indeed, the information before and after the account creation process is equally intended for viewing and access by any and all public entities. In this way, the myRyanair account offering is no different than a bookmark between chapters: its usefulness comes from allowing any public user to return to a particular chapter of the same story more quickly. In

<sup>28</sup> DAY 01 081523 (Deposition of David O'Callaghan) – MASON HAYES & CURRAN DEPOSITION.pdf, Page 139, Lines 21-26.

Ryanair’s own words in its FAQs, the purpose of the account is to “enable you to make bookings faster”:

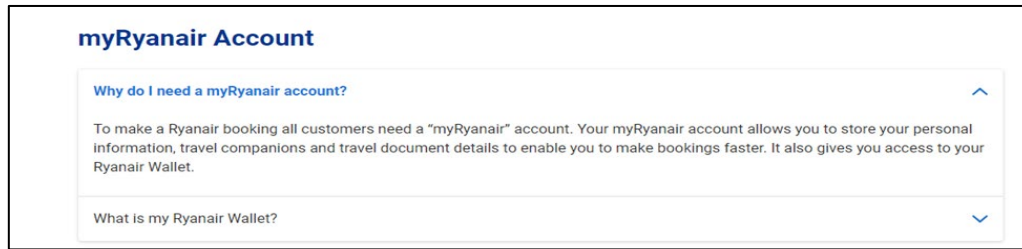


Figure 17: Ryanair FAQs. <https://help.ryanair.com/hc/en-us/articles/12893759512337-Why-do-I-need-a-myRyanair-account>

As a further example of the limited utility of the myRyanair account, once a flight is booked and the traveler takes note of the confirmation number and other pertinent details, the email itself is no longer necessary. A user need never return to the email if the traveler does not wish to utilize a “faster” booking process in the future. Of note, the customer’s ability to conduct additional or related transactions online is meaningfully limited without accessing myRyanair, though the customer can still obtain pertinent flight details by contacting Ryanair and providing the confirmation number or checking in to the flight in person at the airport (for an extra fee of 55 euro imposed on the traveler by Ryanair).<sup>29</sup> In essence, access to the email address and myRyanair account is no longer a necessity once the flight is booked, so long as the customer maintains a copy of the original flight itinerary received upon booking and pays the additional fees at the airport.

### **1.7 Defendants are a Travel Agent, Not a Hacker, Evidenced by a Common Interest in the Functioning of Ryanair’s Site, and Traffic Volume that Mirrors Real Traveler Interest in Ryanair**

The CFAA was enacted to prevent intentional intrusion onto someone else’s computer—specifically, computer hacking.<sup>30</sup> According to the Florida Bar Journal, “The House report on the CFAA analogized the conduct prohibited by the law to breaking and entering into a dwelling, and the legislative history makes clear that the CFAA was ‘designed to prevent unlawful intrusion into otherwise inaccessible computers.’”<sup>31</sup>

In the cybersecurity industry, the term “hacker” is typically used to connote disruptive or malicious behavior, often conducted by a criminal or nation state. According to the leading

<sup>29</sup> RYANAIR-BOOKING\_0026740

<sup>30</sup> See *United States v. Nosal (Nosal I)*, 676 F.3d 854, 858 (9th Cir. 2012) (citing S. Rep. No. 99-432, at 9 (1986) (Conf. Rep.)).

<sup>31</sup> Emily Chase-Sosnoff & Shane T. Muñoz, Understanding the Bounds of the Computer Fraud and Abuse Act in the Wake of Van Buren, Florida Bar Journal, Vol. 96, Issue No. 2., Page 22 (citing *hiQ Labs, Inc. v. LinkedIn Corp.*, 938 F.3d 985, 1000 (9th Cir. 2019) (extensively citing the legislative record); *U.S. v. Valle*, 807 F.3d 508, 525 (2d Cir. 2015) (citing the legislative record and noting that “Congress enacted the CFAA in 1984 to address ‘computer crime,’ which was then principally understood as ‘hacking’ or trespassing into computer systems or data.”)).

provider of Network equipment, Cisco, “a hacker is a person who breaks into a computer system.”<sup>32</sup> Likewise, per global cybersecurity company Kaspersky, “Hacking is the act of identifying and then exploiting weaknesses in a computer system or network, usually to gain unauthorized access to personal or organizational data.”<sup>33</sup> This intent to cause harm is fundamentally at odds with Defendants’ relationship to Ryanair: Defendants’ interest is in Ryanair’s site functioning properly to best serve its potential travelers.

In their capacities as online travel agents offering Ryanair flights to customers, Defendants have an interest in the success and functioning of the Ryanair website. Further, as a travel agency simply facilitating the traffic of real potential travelers, Defendants’ ultimate site traffic volume to Ryanair reflects actual customer demand. Defendants are not malicious cyber actors attempting to hack into Ryanair’s computer networks to steal proprietary or non-public information. Rather the Defendants act as the public’s intermediary, offering travelers a service designed to take the burden of booking a flight off their shoulders. Where and how a passenger chooses to book their travel is their own choice, and in no circumstance can Defendants’ travel service be considered hacking, illicit, or malicious. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>34</sup> Furthermore, best cybersecurity practices dictate that sites that do wish to prohibit agency action, even if not malicious agents, put in place meaningfully tailored authorization and authentication measures.

There is no circumvention of legitimate technical protections, no exploitation of weak or outdated security measures, and no malicious codes, “worms” or the like behind Defendants’ actions that would align it with anything that the cyber industry recognizes as “computer hacking.”

In my opinion and experience in the cyber security industry, and in government regulation and enforcement of cyber security laws, online travel agencies purchasing tickets on Ryanair’s website is not computer hacking. The conduct of Defendants targeted by Ryanair in this case is common—near ubiquitous—commercial conduct on the Internet.

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<sup>32</sup> Cisco Systems, Inc., What is a Hacker? 2023, <https://www.cisco.com/c/en/us/products/security/what-is-a-hacker.html>

<sup>33</sup> AO Kaspersky Lab, What is hacking? And how to prevent it? 2023, <https://usa.kaspersky.com/resource-center/definitions/what-is-hacking>

<sup>34</sup> DAY 02 081623 (Deposition of John Hurley) – MASON HAYES & CURRAN DEPOSITION, Page 99, Line 27 through Page 100, Line 28.

**2. Opinion 2: Ryanair necessarily granted access to its website in order for any flight purchases to have been made.**

As a general preface to this finding, Ryanair produced almost no technical documentation on the configuration of its webserver environment and access of its resources.

Notwithstanding this limitation, there are fundamental concepts underpinning configuration and access of public web servers that apply in this scenario, which are discussed in detail below. These concepts illustrate that online travel agency access of Ryanair is routine and consistent with public use, and to the extent Ryanair's defensive measures were intended to create a gate or barrier of some sort, such gate or barrier was necessarily lifted for all traffic, to include traffic related to online travel agencies.

Throughout Ryanair’s complaint and relevant Ryanair documents reviewed by FTI, Ryanair repeatedly and arbitrarily classifies Defendants’ and similar companies’ activity to be “malicious” “bot activity.”<sup>35</sup> Though bots will be defined and distinguished in the following subsection, it should be noted at the outset that [REDACTED]

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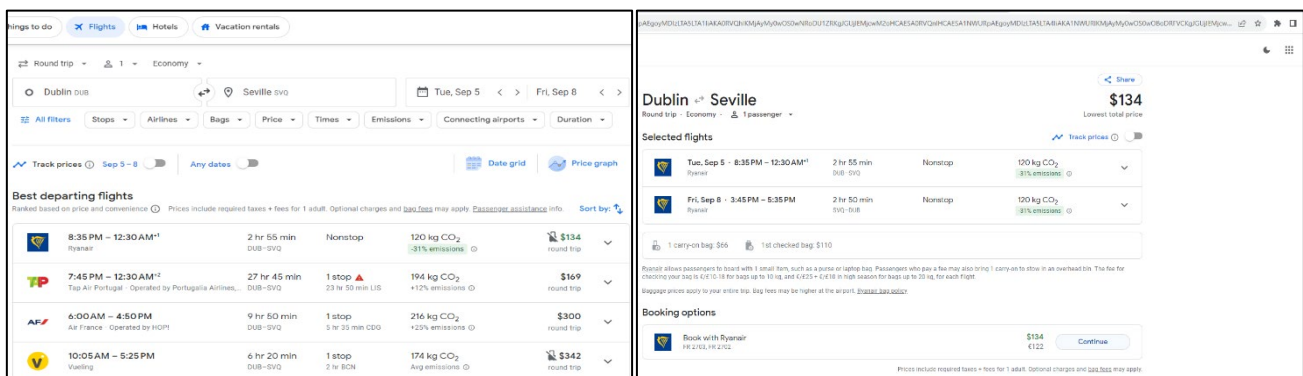


Figure 18: Acquisition of Ryanair Flight Information from Google Flights

<sup>35</sup> 2023-02-13 Plaintiff's First Supplemental Response to Defendants' First Set of Interrogatories; RYANAIR-BOOKING-0016278, Page 1.

<sup>36</sup> RYANAIR-BOOKING-0016278, Pages 1-2.

This suggests both a misunderstanding and mischaracterization as to what, exactly, is considered “good” vs. “bad” bot activity, especially within the cybersecurity context. The mere fact that Ryanair does not agree with Defendants’ utilization of automation to identify and book flights on Ryanair.com does not qualify the activity as malicious, “bad bot” activity, or hacking. Defendants’ activities are no different than what Google does, in that both utilize automation to obtain information from Ryanair’s website, but Ryanair’s classification of Google as non-malicious further shows their classification of “good” vs. “bad” fails to have grounding within a cybersecurity context.

In that light, this finding begins with an explanation of the nature of bots and public web servers, and an examination of Ryanair’s bot management strategy to the extent allowable with documentation provided.

## 2.1 “Good” Bots vs. “Bad” Bots

“Bot” traffic is ubiquitous in the cyber world and makes up almost half of Internet use. Cloudflare, a leading cybersecurity provider, estimates that over 40% of all Internet traffic is comprised of bot traffic.<sup>37</sup> As discussed earlier in this report, a web visitor need not be a human. Computers are just as capable of visiting a site automatically, and in many contexts, help ensure the smooth operation of the Internet. The software programs behind this type of computer automation are called “bots.” At its most basic description, a bot is simply a software program that performs specific tasks over the Internet. A bot can handle a wide range of tasks, from simple, repetitive manual processes to more complex tasks, the functionality of which dates back more than half a century.<sup>38</sup> In the cyber security industry, bots are frequently characterized as either “good” or “bad.”

**Good Bots.** So-called “good bots” are designed to perform legitimate activities. “Good bots” perform helpful and ethical activities, and they are designed to make life easier and more efficient for everyone. There are *search engine bots*, which are employed by popular search engines such as Google, Yahoo, and Bing. There are *backlink bots*, which are an integral part of search engine optimization. *Social media bots* are designed to automate tasks on social media platforms and can create social media posts and provide customer support. There are *chatbots*, which are most often used in a customer service setting and are often the first interaction a customer has with a company when seeking assistance. *Gaming bots* facilitate video game testing, and *e-commerce bots* are designed to help customers with product purchases, provide customer service, answer questions, recommend products, gather feedback, and track customer engagement with 24/7 availability. “Good bots” have many benefits, such as enhanced efficiency of repetitive

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<sup>37</sup> Cloudflare, Inc., What is bot traffic? How to stop bot traffic, 2023, <https://www.cloudflare.com/learning/bots/what-is-bot-traffic/#:~:text=It%20is%20believed%20that%20over,traffic%20coming%20to%20their%20sites.>

<sup>38</sup> Shanika Wickramasinghe, Splunk, Bot Types 101: Bad Bots, Good Bots and Everything in Between, July 26, 2023, [https://www.splunk.com/en\\_us/blog/learn/bots-types.html](https://www.splunk.com/en_us/blog/learn/bots-types.html)



tasks, improved user experience, “always-on availability,” efficient handling of high transaction volumes, reduced costs, and customization.<sup>39</sup>

In fact, Ryanair itself utilizes bots as part of its normal day to day business. Ryanair offers a “Ryanair Live Chat” feature on its website. According to Ryanair, the “chatbot” is the quickest and easiest way to get help from Ryanair. Ryanair’s “Chat Bot Molli” is available 24/7 to assist customers with whatever they need.<sup>40</sup>

**Bad Bots.** Alternatively, so-called “bad bots” are those responsible for many of the malicious threats facing public websites, to include distributed-denial-of-service (“DDoS”) attacks. “Bad bots” pose a serious threat, as they can act as malware, exploit vulnerabilities to gain unauthorized access to user accounts, target specific organizations to tarnish their image on social media, execute ransomware attacks, serve as trojan horses, steal sensitive data, encrypt user data for malicious purposes, post fake news or spread disinformation, execute a DDoS attack, and conduct credential-stuffing attacks to facilitate account take over (ATO).<sup>41</sup>

### 2.1.1 Bot Management Strategies

There are numerous techniques companies can affordably deploy to mitigate the threat from “bad bots.” These techniques are relatively standard across the cybersecurity industry, as the threat from “bad bots” is rather widespread. Techniques include, but are not limited to the following<sup>42</sup>:

- Completely Automated Public Turing Test to Tell Computer and Humans Apart (CAPTCHA/reCAPTCHA)
- Fingerprinting
- Honeypots
- Web Application Firewalls
- Network and Access Log Analysis

It is especially important that search engines do not block “good bots,” such as search engine web crawler bots, because without them, a website would not show up in search results. This would, in turn, harm a company’s business, often rather significantly.

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<sup>39</sup> Shanika Wickramasinghe, Splunk, Bot Types 101: Bad Bots, Good Bots and Everything in Between, July 26, 2023, [https://www.splunk.com/en\\_us/blog/learn/bots-types.html](https://www.splunk.com/en_us/blog/learn/bots-types.html)

<sup>40</sup> <https://help.ryanair.com/hc/en-us/articles/4420827829649-Contact-Customer-Service>

<sup>41</sup> Shanika Wickramasinghe, Splunk, Bot Types 101: Bad Bots, Good Bots and Everything in Between, July 26, 2023, [https://www.splunk.com/en\\_us/blog/learn/bots-types.html](https://www.splunk.com/en_us/blog/learn/bots-types.html)

<sup>42</sup> Shanika Wickramasinghe, Splunk, Bot Types 101: Bad Bots, Good Bots and Everything in Between, July 26, 2023, [https://www.splunk.com/en\\_us/blog/learn/bots-types.html](https://www.splunk.com/en_us/blog/learn/bots-types.html)



## 2.2 Defendants Do Not Deploy “Bad Bots”

Any automation utilized by Defendants indirectly through partner companies is designed to facilitate specific flight booking/reservations on behalf of legitimate travel customers, and is neither malicious in either form or intent nor cyber-intrusion. That is, the traffic originating from Defendants is not designed to cause harm, steal sensitive data, spam, exploit vulnerabilities, deploy malware, or deface Ryanair’s website, among other examples discussed above.

Whether Defendants’ traffic is welcomed by Ryanair becomes irrelevant within the context of cybersecurity, as Defendants’ traffic is not designed to cause such harm, and as the next section discusses, Ryanair has designed its environment to welcome the nature of bots similar in nature to Defendants, which it views as “good bots”.

## 2.3 Ryanair Welcomes Good Bots through its use of industry standard API

### 2.3.1 API Introduction

[REDACTED]

[REDACTED]

[REDACTED]<sup>43</sup>

First, as a simple analogy, an API can be thought of as a wait server at a restaurant; API documentation equates to a menu of offerings by the kitchen. In a restaurant setting, the wait server takes your order and passes it to kitchen for cooking and return. Similarly, when interacting with an API, a request containing specific parameters (identified from API documentation) gets sent to the API, which in turn sends to the relative server(s) for processing and returns the response to the user. [REDACTED]

[REDACTED]

[REDACTED]

If this sounds similar to visits to the Ryanair website, it is because a web service is merely an API wrapped in HTTP, which, as discussed above, is the request language to and from a web server. An API helps automates this exchange.

### 2.3.2 Navitaire’s New Skies

To provide an accessible website, airlines utilize specific e-commerce tools to provide the most seamless experience for their customers, as well as create revenue through various price optimization tools tailored to the industry. Ryanair utilizes Navitaire, which is specifically designed to provide tools to low-cost airlines. Navitaire offers a product called “New Skies,” a digital-first reservation, retailing, and e-commerce system.<sup>44</sup> According to “Plaintiff’s Second Supplemental Responses to Defendants’ First Set of Interrogatories

<sup>43</sup> 2023-07-14 Plaintiff’s Second Supplemental Responses to Defendants’ First Set of Interrogatories, Pages 105-07.

<sup>44</sup> “New Skies Reservation System” <https://www.navitaire.com/new-skies-reservation-system>

(7.14.2023),” “Navitaire is a software that manages the booking process including flight reservations” for Ryanair.<sup>45</sup>

To suit each airline’s specific needs, Navitaire allows companies to develop their own APIs, which then allows for different website capabilities by using pre-built functionalities and libraries, so the companies’ own developers do not have to build all common functionalities from scratch. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]<sup>46</sup> New Skies provides the resources for airlines to access the global distribution system (GDS) platform, which is a tool that can be used to facilitate reservations from service providers to travel agencies, as well as price optimization tools, payment processing, and work with “alternative distribution options” such as online travel agencies (OTAs).<sup>47</sup> A global distribution system facilitates transactions between service providers, such as Ryanair and travel agencies, by keeping an inventory of available flights that can be booked by the travel agent or agency.<sup>48</sup>

Outside of online sales through its website, Ryanair allows “offline” distribution channels (i.e., “brick and mortar” travel agents and closed non-public corporate travel agents) to access Ryanair fares and sell Ryanair flights through one of three GDS partners: Amadeus, Sabre and Travelport.<sup>49</sup>

Even more, the Navitaire software is a subsidiary of Amadeus, making this GDS a core piece of Ryanair’s booking software.<sup>50</sup> The presence of Ryanair flights on several GDSs expands the scope of who can book Ryanair flights and is a voluntary partnership on behalf of Ryanair. This inherently opens Ryanair flights up to booking opportunities outside of a direct channel that is merely a customer and service provider interaction.

Ryanair’s “open/public access model” and desire to market its services to the widest audience possible is best demonstrated in the following two press examples:

- According to a Ryanair press release on Aviation 24.be, As of November 2022, Ryanair and Amadeus resumed their GDS partnership. Accordingly, this “new distribution partnership” is designed to “further expand access to Ryanair’s offering

<sup>45</sup> 2023-07-14 Plaintiff’s Second Supplemental Responses to Defendants’ First Set of Interrogatories, Page 21.

<sup>46</sup> 2023-07-14 Plaintiff’s Second Supplemental Responses to Defendants’ First Set of Interrogatories, Page 27.

<sup>47</sup> “New Skies Reservation Brochure”

<https://www.navitaire.com/downloads/New%20Skies%20Reservations%20Brochure.pdf>

<sup>48</sup> <https://amadeus.com/en/topic/travel-platform/global-distribution-system-gds>

<sup>49</sup> 2023-07-14 Plaintiff’s Second Supplemental Responses to Defendants’ First Set of Interrogatories, Pages 106-107.

<sup>50</sup> <https://www.navitaire.com/amadeus#:~:text=Navitaire%2C%20a%20wholly%20owned%20subsidiary,and%20solve%20critical%20business%20challenges.>

to Amadeus' industry-leading customer base." This "partnership supports Ryanair's vision to grow its visibility and reach to Amadeus customers, particularly for business travel. This seamless integration with Amadeus' booking flows and processes will grant customers high operational efficiency in searching, booking and servicing content from Ryanair, as well as being able to offer a broader choice of travel options to cost-conscious travellers."<sup>51</sup>

- According to Dara Brady, Head of Digital Experience at Ryanair, "[w]e are pleased to announce this partnership with Amadeus, the world's leading travel technology company, further expanding Ryanair's offering and enabling corporate customers in particular greater access to our unrivalled network of connections, high frequencies, on-time performance, and unbeatable low fares as they return to collaborating with colleagues face-to-face. We look forward to working with Amadeus and its efficient distribution solution and industry-leading network over the coming years."<sup>52</sup>
- According to Jose-Luis Aragon, Amadeus Regional VP for Air Distribution in Europe, "We are very happy that Ryanair has chosen to capitalise [sic] on Amadeus' technology to support its distribution strategy. This partnership illustrates the value of our platform for low-cost carriers, offering the airline access to the widest network of travel sellers worldwide and the technology to help them get the most out of the indirect channel. This partnership is another example of our commitment to delivering the broadest and most relevant travel content from any technology source to our travel sellers, with smooth and seamless integration into their everyday tools and processes."<sup>53</sup>
- An airport API is a web-based interface that allows you to access airline data on the fly. The API provides you with real-time flight information, including flight times, delays, and cancelations among much other valuable information. An airport API can also be utilized to search for flights and view seat maps. This type of service is extremely beneficial for a variety of reasons. Perhaps you are a travel agent looking to keep your customers updated on the status of their flights, or maybe you are an airline looking to offer your customers real-time flight information. Either way, an airport API can provide you with the data you need.<sup>54</sup> To that end, a general

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<sup>51</sup> André Orban, Aviation24.be, Ryanair and Amadeus partner again to enhance travel offering, November 11, 2022, <https://www.aviation24.be/airlines/ryanair/ryanair-and-amadeus-partner-to-enhance-travel-offering/>

<sup>52</sup> André Orban, Aviation24.be, Ryanair and Amadeus partner again to enhance travel offering, November 11, 2022, <https://www.aviation24.be/airlines/ryanair/ryanair-and-amadeus-partner-to-enhance-travel-offering/>

<sup>53</sup> André Orban, Aviation24.be, Ryanair and Amadeus partner again to enhance travel offering, November 11, 2022, <https://www.aviation24.be/airlines/ryanair/ryanair-and-amadeus-partner-to-enhance-travel-offering/>

<sup>54</sup> The Startup Founder, An Airport API Provides You With Ryanair Airline Data On The Fly, <https://www.thestartupfounder.com/an-airport-api-provides-you-with-ryanair-airline-data-on-the-fly/>

Internet search for “Ryanair API” yields a number of valuable results. For example, one can find and configure the following API endpoints for Ryanair<sup>55</sup>:

- API Domains
- Airports
- Closures
- Flight Information
- Schedules
- Availability and fares information
- Fair finder
- Currencies
- Discounts
- Markets

As indicated by the above two examples, in particular the renewed partnership with Amadeus, Ryanair seeks to benefit from the widened scope of buyers that placing flights on a GDS attracts, specifically business travelers. Ryanair is cited as engaging or re-engaging in each of their respective partnerships with Travelport in 2014,<sup>56</sup> Sabre in 2015,<sup>57</sup> and Amadeus in 2022,<sup>58</sup> to capitalize on the opportunity to engage with business travel and corporate customers.

Ryanair’s efforts to selectively ban Defendants, which by cybersecurity definition employ “good bots,” is ineffective. The technical challenges that ensue from the mere fact Ryanair wants good bots to access its site, with the exception of Defendants (due to name and not characteristic), is the focus of the next section of this report.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

<sup>55</sup> <https://gist.github.com/vool/bbd64eeee313d27a82ab>

<sup>56</sup> Edward Robertson, We believe in the GDS: Ryanair signs travelport deal, March 11, 2014, <https://www.ttgmedia.com/news/we-believe-in-the-gds-ryanair-signs-travelport-deal-86>

<sup>57</sup> André Orban, Ryanair signs new agreement with Sabre GDS, May 6, 2015, <https://www.aviation24.be/airlines/ryanair/ryanair-signs-new-agreement-with-sabre-gds/>

<sup>58</sup> Monica Hansen, Amadeus Corporate Communications, Ryanair and Amadeus partner to enhance travel offering, November 11, 2022, <https://amadeus.com/en/insights/press-release/ryanair-and-amadeus-partner-to-enhance-travel-offering>

<sup>59</sup> RYANAIR-BOOKING 0026973.pdf

- [REDACTED]  
[REDACTED]  
[REDACTED] // 60

All said, Ryanair welcomes the very type of automated access business that Defendants are also doing, but Ryanair wants to selectively ban Defendants.

## 2.4 Ryanair's Bot-banning strategy, including SHIELD, necessarily must allow any traffic from Defendants that lead to purchasing a flight

Ryanair's SHIELD solution seeks to identify devices, users, and accounts a website/network can trust, and those that it cannot.

Though limited documentation has been produced detailing Ryanair's implementation of SHIELD, open source research, review of the August 2023 depositions cited elsewhere in this report, and a review of SHIELD's public website indicate [REDACTED]

[illegible]


<sup>60</sup> RYANAIR-BOOKING-0016261, Pages 1-2.

<sup>61</sup> RYANAIR-BOOKING 0014245; RYANAIR-BOOKING 0026785; RYANAIR-BOOKING-0016378.

62 RYANAIR-BOOKING 0026915

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SHIELD provides Ryanair with information for decision making, not active prevention without routine user intervention and configuration. SHIELD collects and provides intelligence for its customer(s) so that they may make precise decisions about risk. Based on SHIELD's intelligence and analytics, a customer can configure traffic filtering and blocking, though this requires the customer's intervention to develop and deploy the rules.<sup>65</sup> Through SHIELD's network analytics, threat libraries, AI, and intelligence network, customers are able to monitor traffic in real time and customize network filters and block lists based on their own threat matrix and business needs.<sup>66</sup> SHIELD can be designed to automate network filtering; however, as noted above, it requires customer intervention and configuration based on network metrics, traffic, and business needs. SHIELD's Risk Policy Engine, for example, allows the customer to "set thresholds and take action themselves based on configurable risk policies. Customers can leverage SHIELD's intelligence to challenge, deny, or allow access to users in real time."<sup>67</sup>

<sup>63</sup> 2023-03-01 Plaintiff's Responses to Defendants' Second Set of Interrogatories (Nos. 15-29), Page 8.

<sup>64</sup> DAY 02 081623 (Deposition of John Hurley) – MASON HAYES & CURRAN DEPOSITION, Page 102, Lines 3-7.

<sup>65</sup> <https://shield.com/use-cases/bot-attacks>; <https://shield.com/use-cases/account-takeovers>

<sup>66</sup> <https://shield.com/use-cases/account-takeovers>

<sup>67</sup> <https://shield.com/compliance-ai>

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

<sup>68</sup> RYANAIR-BOOKING\_0026799, Page 6.

<sup>69</sup> DAY 02 081623 (Deposition of John Hurley) – MASON HAYES & CURRAN DEPOSITION, Page 52, Lines 15-26.

<sup>70</sup> RYANAIR-BOOKING-0016234, Page 1.

<sup>71</sup> RYANAIR-BOOKING-0016234, Page 5 (emphasis omitted and added).

<sup>72</sup> RYANAIR-BOOKING\_0027623, Page 8.

<sup>73</sup> RYANAIR-BOOKING-0016234, Page 5

<sup>74</sup> RYANAIR-BOOKING\_0026799, Page 3.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] From a cybersecurity perspective, the problem with this approach remains that even if Ryanair seeks to label SHIELD as a “gate,” it has, effectively, left the “gate” open and any person or entity can access Ryanair with ease. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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<sup>75</sup> RYANAIR-BOOKING\_0026799, Page 2.

<sup>76</sup> 2023-07-14 Plaintiff’s Second Supplemental Responses to Defendants’ First Set of Interrogatories, Pages 106-07.

<sup>77</sup> DAY 03 081723 (Deposition of Lukasz Stocki) – MASON HAYES & CURRAN DEPOSITION, Page 90, Lines 14-23; Page 115, Lines 21-24.

<sup>78</sup> DAY 03 081723 (Deposition of Lukasz Stocki) – MASON HAYES & CURRAN DEPOSITION, Page 115, Lines 21-24; Page 112, Lines 17-23.

<sup>79</sup> DAY 03 081723 (Deposition of Lukasz Stocki) – MASON HAYES & CURRAN DEPOSITION, Page 65, Lines 18 through Page 66, Line 1.

<sup>80</sup> DAY 03 081723 (Deposition of Lukasz Stocki) – MASON HAYES & CURRAN DEPOSITION, Page 62, Lines 10-12; Page 85, Lines 7-9 and 25-29.



**3. Opinion 3: There is no documentation or evidence that any of the Defendants caused harm to the Ryanair website.**

Ryanair contends that traffic on its website sometimes causes the website to slow down or stop, which interferes with customers who are attempting to use the website. From the perspective of cybersecurity attribution, however, there is no evidence that web traffic or ticket bookings connected to Defendants have caused or contributed in any way to any impact on Ryanair's web server.

Learned from extensive experience in both cybersecurity consulting and law enforcement, one of the most difficult aspects of conducting a cyber investigation is the matter of attribution—specifically, can a given cyber action be tied to a specific individual or group with a high degree of accuracy and confidence? Here it cannot.

The logic syllogism that Ryanair posits is not supported by any computer-based or technical evidence, which Ryanair witnesses concede. Ryanair proceeds with the syllogism that “unwanted activity was observed; Actor A is unwanted; therefore Actor A is responsible for the activity.” This is the underpinning for its accusation of “harm” for which it alleges Defendants are responsible, as evidenced by the following statement:

Because Defendants' direct and indirect access is masked by the use of dynamic IP addresses and other purposefully misidentifying information, making it difficult if not impossible for Ryanair to determine which of the unauthorized attacks originated with Defendants or those acting at the direction, encouragement, or inducement of Defendants, Ryanair attributes the entirety of the above-referenced damages and costs to Booking.com, Priceline.com, Kayak, and Agoda, jointly and severally.<sup>81</sup>

<sup>81</sup> 2023-02-13 Plaintiff's First Supplemental Response to Defendants' First Set of Interrogatories, Page 7.

<sup>82</sup> DAY 02 081623 (Deposition of John Hurley) – MASON HAYES & CURRAN DEPOSITION, Page 41, Lines 10-18.

**Priceline**<sup>117</sup>

[REDACTED]

**Agoda**<sup>118</sup>

[REDACTED]

**All Defendants, Cumulatively**

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED] Furthermore, any

<sup>117</sup> 2023-06-07 Priceline.com LLC’s Responses and Objections to Plaintiff Ryanair DAC’s Second Set of Interrogatories & Ex. A; RYANAIR-BOOKING\_0022845.xlsx. “Flights” is derived from the “Bookings” column in Ex. A.

<sup>118</sup> 2023-06-07 Agoda Company Pte. Ltd.’s Responses and Objections to Plaintiff Ryanair DAC’s Second Set of Interrogatories & Ex. A; RYANAIR-BOOKING\_0022845.xlsx.

allegation [REDACTED]  
[REDACTED]  
[REDACTED].

### 3.4 Overall Takeaways

From a network efficiency and stability perspective, all of the above considerations play into volume arriving at a website. Ryanair has thus far provided no attribution to Defendants for significant and/or prolonged surges that would legitimately lead to a network slowdown or outright disruption, failing to demonstrate Defendants were in any way responsible for perceived or real network strain. Moreover, Ryanair intentionally invites surges of bot activity, which would certainly contribute to an increase in demand for network resources, as discussed in prior sections. In addition, [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Above all, by operating a public website intended for public consumption, one is inevitably forced with its associated operating costs. As discussed earlier in this report, there are many different tools and capabilities a company can deploy to block “bad bot” activity and ensure only wanted/legitimate bot activity can access its website. Ryanair chooses not to deploy these options because they would reduce the number of users on its website and cause “friction” amongst its customer base.

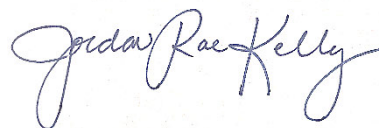
## Conclusion

As a result of my analysis and examination of the materials provided, it is undisputable that Ryanair presented a public website intended for access by as many patrons as possible, both through direct access and through the indirect use of both human and automated agents. The idea of “gates” on a public website is inherently contradictory from a technical standpoint. As an agent of the people seeking Ryanair flights, Defendants’ traffic to Ryanair’s site reflects traffic sought by Ryanair - traffic that is both benign in intent, to get a flight booked, and form, through automated use of the site that Ryanair otherwise invites.

It is evident from the use of the Ryanair site and the August 2023 depositions that the Ryanair site held no proprietary information meriting AAA access controls. Simply requiring an email address and password is not tantamount to AAA access control when there is no limit on access. Likewise, deploying a website tool, SHIELD, whose purpose is to identify unwanted behavior after that same behavior has been let in, is not a gate by any stretched

definition or connotation. This is particularly underscored by the fact that Ryanair intentionally seeks the very type of traffic that Defendants bring to Ryanair's site from other sources who aren't Defendants in particular.

Either for this reason, for other strategic motives, or for the likely reason that it doesn't exist, Ryanair has not provided any technical supporting documentation connecting Defendants to the harm alleged on its site. The "harm," which I believe is more accurately characterized as "frustrations" that Ryanair expresses, are commonplace and logical consequences of operating a public website.

A handwritten signature in blue ink that reads "Jordan Rae Kelly". The signature is written in a cursive, flowing style.

Dated: August 31, 2023

---

Jordan Rae Kelly

# EXHIBIT 36

**PUBLIC VERSION - CONFIDENTIAL MATERIAL OMITTED**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

- - - - -	x	
	:	
RYANAIR DAC,	:	
	:	
Plaintiff,	:	
	:	
vs.	:	C.A. No.
	:	1:20-CV-01191-WCB
BOOKING HOLDINGS INC.,	:	
BOOKING.COM B.V., KAYAK	:	
SOFTWARE CORPORATION,	:	
PRICELINE.COM LLC, and	:	
AGODA COMPANY PTE, LTD.,	:	
	:	
Defendants.	:	
	:	
- - - - -	x	

CONFIDENTIAL - ATTORNEYS' EYES ONLY

VIDEOTAPED DEPOSITION OF  
JORDAN R. KELLY

Washington, D.C.

October 4, 2023

Reported by:  
Misty Klapper, RMR, CRR, CSR  
Job No.: 1034063

2

Wednesday, October 4, 2023

9:38 a.m. EDT

Held at the offices of:

Holland & Knight

800 17th Street, N.W., Suite 1100

Washington, D.C. 20006

(202) 955-3000

Taken pursuant to notice, before Misty Klapper, Registered Professional Reporter, Certified Realtime Reporter, Certified Shorthand Reporter and Notary Public in and for the District of Columbia.

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Jordan R. Kelly	Mr. Donoghue	6

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Exhibit 419	Rebuttal report of Jordan Rae Kelly, dated 9/29/23	368

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### ALSO PRESENT:

ROBYN ELLIS, VIDEO OPERATOR

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## PROCEEDINGS

VIDEO OPERATOR: We are now on the record. This begins videotape number 1 in the deposition of Jordan Kelly in the matter of Ryanair DAC, Plaintiff, versus Booking Holdings, Inc., Booking.Com B.V., Kayak Software Corporation, Priceline.com, LLC and Agoda Company PTE, LTD. -- LTD., Defendants, in the United States District Court for the District of Delaware, Case Number 1:20-CV-01191-WCB.

Today is October 4th 2023 and the time on the monitor is 9:38 a.m. This deposition is being taken at Holland & Knight, 800 17th Street, Northwest, Washington, D.C. 20006 at the request of Holland & Knight.

The videographer is Robyn Ellis of Magna Legal Services and the court reporter is Misty Klapper of Magna

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1 considerable time reviewing and interacting  
2 with the Ryanair website, right?

3 A. Yes.

4 Q. How long?

5 A. I don't know that that's an  
6 estimate I could make offhand. We have  
7 certainly -- you can clearly see from both  
8 reports the level of interaction we've had  
9 with examining what we believe we can tell  
10 about it from a technical perspective within  
11 browser features.

12 And I'd be hesitant to put a  
13 number when I certainly don't have our -- our  
14 time entries or a real sense of the totality  
15 of that number.

16 Q. All right. And then further down  
17 in that paragraph you say that interacting  
18 with the Ryanair website demonstrates that  
19 it's public and there's no barrier to access,  
20 correct?

21 A. Yes.

22 Q. But it does require an account

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1 cybersecurity terminology. They are  
2 certainly more lingo that we -- we  
3 see.

4 So whether or not the creation  
5 of an account poses a barrier, I'm not  
6 sure that I can weigh in. But I do  
7 believe that -- that it -- it -- from  
8 a technical perspective, just given  
9 that it's not a technical measure that  
10 is a common, known term, I believe  
11 creation of the account, which is open  
12 to all users, is not a barrier.

13 BY MR. DONOGHUE:

14 Q. Why do you believe the creation  
15 of account -- creation of an account is not a  
16 barrier?

17 A. Again, it's -- it's a little  
18 imprecise because of the fact that these  
19 aren't, you know, industry standard  
20 technology terms, but the -- if -- we could  
21 probably pull -- the definition of a barrier  
22 implies -- it -- you know, it -- it creates

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1 with a password to book a flight?

2 MR. KASNER: Object to form.

3 THE WITNESS: It's probably  
4 worth the nuance here. What you have  
5 said is correct, to -- does it require  
6 an account with a password to book a  
7 flight, going to the general Ryanair  
8 website does not require such an  
9 action.

10 BY MR. DONOGHUE:

11 Q. So logging on to www.ryanair.com  
12 doesn't have any barrier to access?

13 A. To my knowledge, correct. We  
14 could go there now with no password  
15 combination needed.

16 Q. But purchasing a flight on  
17 ryanair.com does have a barrier in that you  
18 have to have an account with a password?

19 MR. KASNER: Object to form.

20 THE WITNESS: I think it's  
21 probably worth noting that the terms  
22 gate and barrier are not inherently

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1 an impasse.

2 And I would suggest that it's not  
3 an impasse, rather than the -- the creation  
4 of the account and password is not an  
5 impasse, rather than just a step in the  
6 process.

7 Q. So creation of an account is a  
8 step, not a barrier?

9 MR. KASNER: Object to form.

10 THE WITNESS: I agree with  
11 that, just as typing in the website  
12 address into the browser is a step.  
13 You have to know ryanair.com to do it.  
14 But it is available for you to do it,  
15 just as it is available for you to  
16 type a -- create an account and move  
17 forward in the process.

18 BY MR. DONOGHUE:

19 Q. So a barrier has to be an  
20 absolute stop to something?

21 MR. KASNER: Object to form.

22 THE WITNESS: I think -- again,



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**Q. In terms of being a barrier.**

A. Well, I don't think either are barriers. But I view them as similar, you know, similar actions that one must take to move forward, yes.

**Q. But they are different in that the myRyanair.com provides access to stored personally identifiable information?**

MR. KASNER: Object to form.

THE WITNESS: Oh. They are different, right? I don't think that they are the exact same thing. I think they are conceptually in the process.

But to my earlier point, myRyanair -- provision of your credentials appears to provide one access to one's own information that they have chosen to provide to myRyanair. And I'm not sure, because of, again, not having full -- knowledge of the network

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architecture -- that that information is being stored in the environment that's deemed myRyanair. [REDACTED]

So there are -- there's obviously a protocol of a touchpoint happening there. And I'm able to access that by being there, but I -- I wouldn't agree that logging in means I -- I'm getting access to some secret spot on myRyanair where my things are stored, because that's not been made plain or evident to me.

BY MR. DONOGHUE:

**Q. So you say to a secret spot on myRyanair.**

**Does myRyanair need to be secret to be private?**

MR. KASNER: Object to form.

THE WITNESS: This is on me again, introducing imperfect technology. I did -- certainly meant

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that sort of in a little bit of a -- a whimsical sense.

Our further --

Too fast?

Our further examination revealed technical indicators that seemed to reflect the same. And so in -- forgive me for the secret spot in myRyanair.

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BY MR. DONOGHUE:

**Q. Okay. And under your definition of a barrier, creation of an account with a password doesn't -- doesn't count as a barrier?**

A. In my view, that is not a barrier.

**Q. And that view isn't based on some particular cybersecurity standard?**

MR. KASNER: Object to form.

THE WITNESS: Agreed. As we kind of initially embarked down this piece, both gate, technological barrier are terms that we certainly see in the -- the legal piece here, but not in the textbook definition of -- we tend to in the cybersecurity professionals community speak more specifically about mechanisms and what those mechanisms do and not -- there

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1 is not one broad category that I'm  
2 aware of where you go and you say what  
3 are all the gates or what is a gate.

4 But the -- and I won't assent  
5 that this is a barrier, but  
6 particularly because the -- if there  
7 is -- if it does place any limitation  
8 on the user, it's only by the user  
9 because they could, as you had said,  
10 choose to not make an account at that  
11 point. But the concept of a barrier  
12 is an -- a -- a stopping point that is  
13 implemented by the network environment  
14 owner and we do not have that here.

15 BY MR. DONOGHUE:

16 **Q. So the requirement for a barrier**  
17 **is that it be controlled by the website**  
18 **provider?**

19 MR. KASNER: Object to form.

20 THE WITNESS: I would actually  
21 say -- you know, I'm sort of -- at a  
22 high level, yes. An environment that

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1 **the hands of the user?**

2 MR. KASNER: Object to form.

3 THE WITNESS: I'm trying -- I'm  
4 trying to -- to think through that,  
5 like because I'm trying to think of,  
6 like, sophisticated passwords and  
7 things where -- I mean, I'm -- I --  
8 hypotheticals are very difficult,  
9 right, and I -- so I don't want to --  
10 I -- I imagine there could be some  
11 scenario where -- I'm sure Alex is  
12 cringing -- I'm going to do a  
13 hypothetical.

14 I am the network provider and I  
15 give you a very complicated password.  
16 And in my provision of that password  
17 to you, I lose -- I don't know it  
18 anymore. It's no longer knowable by  
19 me. It is only knowable by you. But  
20 now you lose it. And now I think  
21 because we don't have what we need to  
22 move forward and it can't be achieved

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1 is owned and operated by someone else  
2 and they are gearing -- imposing an  
3 impasse or impediment that they decide  
4 who will be able to overcome -- could  
5 you say the question again and let me  
6 just think through my response?

7 BY MR. DONOGHUE:

8 **Q. The requirement for a barrier is**  
9 **that it be controlled by the website**  
10 **provider?**

11 MR. KASNER: Object to form.

12 THE WITNESS: No, I don't think  
13 I want to make that -- that conflation  
14 exactly. But in the -- in that  
15 example I just gave, the -- what I am  
16 trying to indicate is that in this  
17 situation of progressing through to  
18 the environment, control and decision  
19 to progress through is fully in the  
20 hands of the user.

21 BY MR. DONOGHUE:

22 **Q. And the barrier can't be fully in**

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1 somewhere other than by you, you had  
2 it, that would be an instance where  
3 we've created an impediment that the  
4 user has some level of responsibility  
5 over.

6 It's kind of a -- I mean, I  
7 guess I'm just trying to say, like, in  
8 these worlds of these configurations,  
9 I don't know that it's -- it's a good  
10 thing to say no, the user can never be  
11 responsible for the barrier.

12 BY MR. DONOGHUE:

13 **Q. Does the barrier have to be**  
14 **absolute?**

15 MR. KASNER: Object to form.

16 THE WITNESS: Could you tell me  
17 what you mean by absolute?

18 BY MR. DONOGHUE:

19 **Q. Well, in your example, the user**  
20 **lost the password that couldn't be retrieved**  
21 **by the website provider and that became a**  
22 **barrier to entry for the user, I presume**

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1 is somewhere between 600 and 750, but  
2 we can find out for sure.

3 BY MR. DONOGHUE:

4 **Q. What was the test designed to**  
5 **determine?**

6 A. So this demonstration was  
7 intended to really further enumerate for the  
8 report and for the readers of the report the  
9 process by which someone can progress through  
10 the various steps of creating account -- an  
11 account and making a booking.

12 Obviously, it wouldn't have been  
13 necessary to create a temporary disposable  
14 E-mail or use a non-attributable payment  
15 method to -- to also do such a demonstration.  
16 But in this instance, we chose to do that to  
17 demonstrate the highly permissive nature of  
18 the environment and the low perceivable level  
19 of scrutiny placed on the characteristics of  
20 the -- the user that we were being as we  
21 moved through the environment.

22 **Q. All right. So this was a point**

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1 allows for a transient E-mail address  
2 that you don't expect to have and use  
3 for a permanent basis, just as we did  
4 here in the testing.

5 And as you can see from that  
6 simulation, it created a domain name  
7 associated with that E-mail. And  
8 there would be methods to be aware of  
9 the domain names that would be either  
10 definitely or most likely to be  
11 associated with those temporary  
12 E-mails. And those could be deemed  
13 impermissible to move forward in the  
14 environment.

15 BY MR. DONOGHUE:

16 **Q. Turning to page 17 of**  
17 **Exhibit 418, the -- the text at the top of**  
18 **the page below the --**

19 A. Um-hmm.

20 **Q. -- Ryanair image says, The**  
21 **replicated testing did not encounter any**  
22 **obstacles or technical limitations despite**

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1 **that it was more a demonstration than a test?**

2 A. Yes.

3 **Q. Did you take the Ryanair flight?**

4 A. We did not.

5 **Q. You missed out. It probably**  
6 **would have been wonderful.**

7 **How would you stop someone from**  
8 **using a temporary E-mail?**

9 MR. KASNER: Object to form.

10 THE WITNESS: There are a few  
11 mechanisms through which one could do  
12 that.

13 You -- temporary E-mail is not  
14 a -- temporary E-mail is a term of art  
15 more than science, meaning if I were  
16 to say I want to create a Gmail  
17 account that I'm only going to use for  
18 a moment, that, in theory, could be a  
19 temporary E-mail.

20 But in most instances when  
21 people refer to a temporary E-mail,  
22 they're talking about a service that

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1 **attempting to flag many hallmark signs of**  
2 **suspicious behavior.**

3 **Do you see that?**

4 A. Yes.

5 **Q. The replicated testing, that's**  
6 **the demonstration we're talking about?**

7 A. Yes.

8 **Q. And you said the demonstration**  
9 **was performed by your team?**

10 A. Yes.

11 **Q. So it wasn't done by an automated**  
12 **system?**

13 A. It was not.

14 **Q. It wasn't a computer that was**  
15 **taking the actions, it was a user presumably**  
16 **on a keyboard of some sort?**

17 MR. KASNER: Object to form.

18 THE WITNESS: Correct.

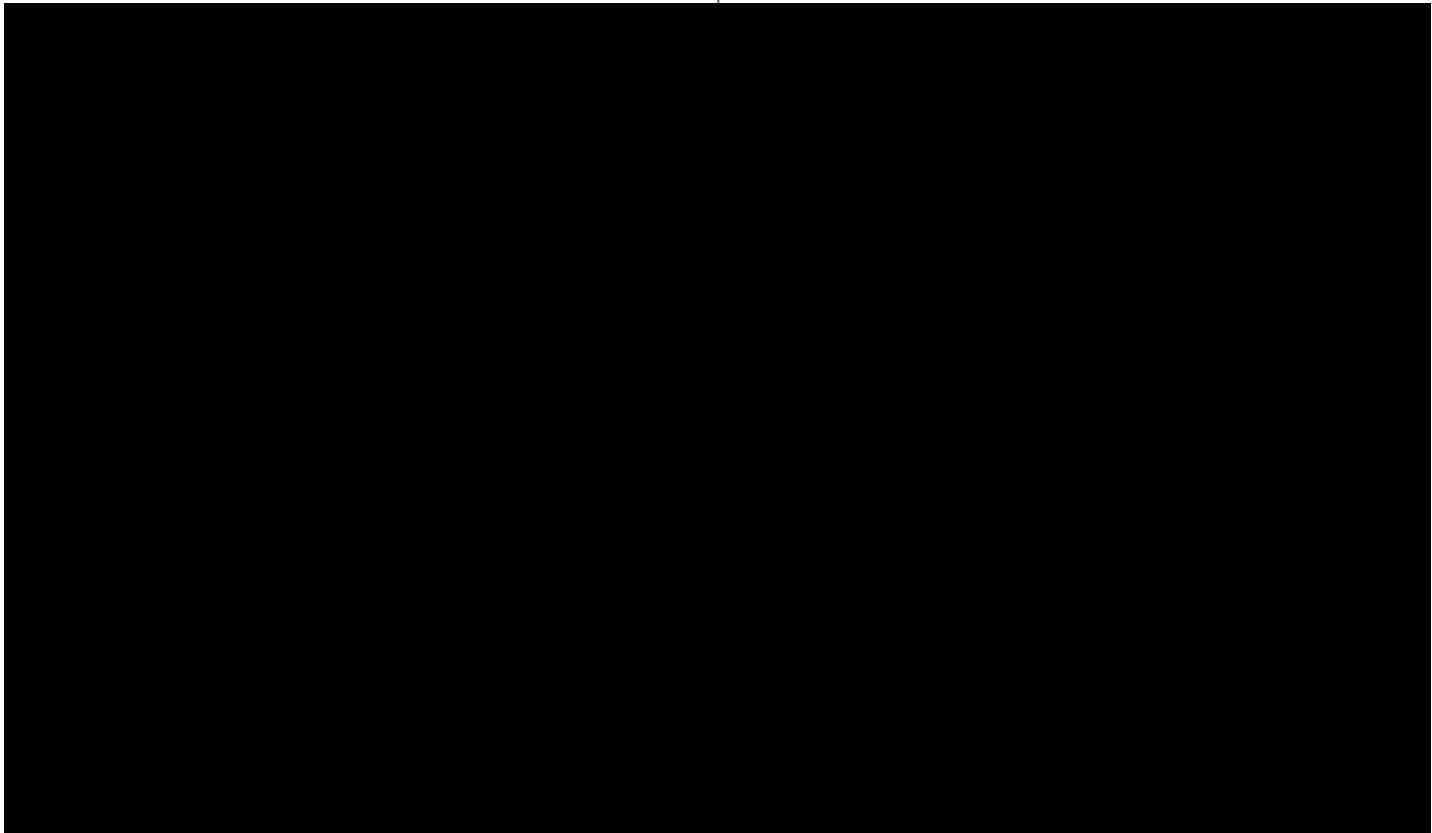
19 BY MR. DONOGHUE:

20 **Q. And so you're aware of SHIELD?**

21 A. I am.

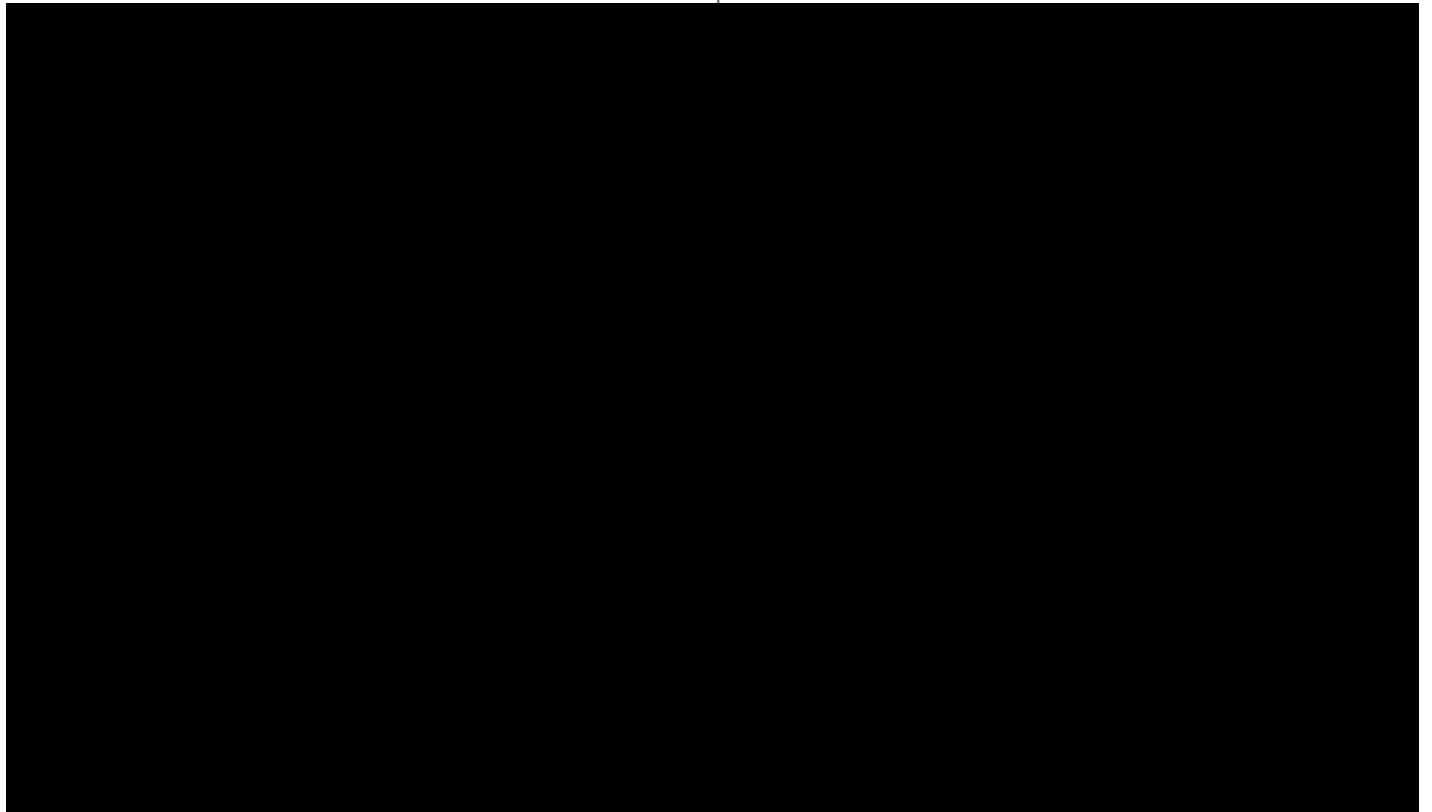
170

171



172

173



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MR. KASNER: Object to form.  
THE WITNESS: What do you mean  
by a right?

BY MR. DONOGHUE:

**Q. What do you think a right is?**

MR. KASNER: Object to form.

THE WITNESS: I guess I'm  
trying to get at if you mean do they  
have the ability to configure their  
website in that way, are they legally  
allowed to do that. I just want to  
make sure I'm understanding the --

BY MR. DONOGHUE:

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240

**Q. All right. And turning to  
page 22 of your report, Exhibit 418, there's  
a good versus bad bot discussion.**

A. Yes.

**Q. Do you see that?**

A. I do, yes.

**Q. The good versus -- sorry.  
Apparently I left my phone in here.**

The good versus bad bot --

MR. DONOGHUE: We're going to  
go off the record for a second.

VIDEO OPERATOR: The time is  
now 2:20. We're off the record.

(Thereupon, a brief recess was  
taken.)

VIDEO OPERATOR: The time is  
now 2:21. We are back on the record.

BY MR. DONOGHUE:

**Q. Is there a definition of good**

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**bots versus bad bots?**

A. There is not. That is a -- a  
colloquial characterization. I think I've  
attempted to sort of aggressively footnote  
some of the interpretations that you might  
see in the community on that, but there is no  
dictionary good bot, bad bot definition.

**Q. Good versus bad bot is somewhat  
in the eye of the website?**

MR. KASNER: Object to the  
form.

THE WITNESS: I think that  
there -- I would say there are some  
broad characteristics that most in the  
community would agree about what is  
good and what is bad. And so I think  
in -- to your suggestion that the  
website is the determiner of good or  
bad might be a, you know, more  
specific conclusion to reach, rather  
than I do think if you canvassed a  
room of cybersecurity professionals,

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1 they would give you some  
2 characteristics that would broadly  
3 fall into good category and bad  
4 category. And I've attempted to do  
5 that within my report.

6 BY MR. DONOGHUE:

7 **Q. Good bots perform legitimate**  
8 **activities?**

9 A. Yes.

10 **Q. And they're helpful and ethical**  
11 **activities?**

12 A. As a broad characterization, yes.

13 **Q. Would ethical include adhering to**  
14 **terms of use of a website?**

15 MR. KASNER: Object to form.

16 THE WITNESS: I don't generally  
17 think of ethics and ascension to terms  
18 of use as being kind of inherently  
19 linked.

20 BY MR. DONOGHUE:

21 **Q. Why not?**

22 A. Perhaps a more appropriate word

244

1 **Q. Is it an ethical activity to**  
2 **disregard the website's terms of use?**

3 MR. KASNER: Object to form.

4 THE WITNESS: I don't think  
5 it's inherently ethical or unethical  
6 [sic], especially not without having  
7 the terms of use in front of you to  
8 observe them. The terms of use could  
9 be the -- unethical. And I think  
10 ethics -- although with this many  
11 lawyers as we have might agree --  
12 might disagree that the concept of  
13 ethics is relatively subjective. But  
14 it -- it certainly -- it requires  
15 quite a lot of determination about the  
16 appropriateness of behavior.

17 BY MR. DONOGHUE:

18 **Q. All right. So ethics are**  
19 **subjective?**

20 MR. KASNER: Objection to form.

21 THE WITNESS: Can be. I think  
22 in the context here that I've said

243

1 to have used rather than ethical would have  
2 been non-malicious, meaning there's sort of  
3 a -- a general sense of positive intent.

4 **Q. So it's not that good bots are**  
5 **ethical, it's that they have good intent?**

6 MR. KASNER: Object to form.

7 THE WITNESS: I think I'm --

8 I'm generally comfortable with that  
9 characterization, although more  
10 comfortable with sticking with the  
11 words from my report. But -- but good  
12 bots are, again, legitimate -- you  
13 said legitimate activities, helpful  
14 activities, meant to increase  
15 efficiencies and drive behaviors that  
16 are -- have a general connotation of  
17 being positive and non-malicious.

18 BY MR. DONOGHUE:

19 **Q. So sticking with the words of**  
20 **your report, good bots are ethical?**

21 A. Good bots perform ethical  
22 activities.

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1 ethical activities, the dictionary  
2 definition would likely point us to  
3 something that says lives up to  
4 societal expectations, does not  
5 conduct bad behavior. Those are the  
6 general terms that I think come to  
7 mind when we think about good bots and  
8 their behavior.

9 BY MR. DONOGHUE:

10 **Q. So is it ethical to breach**  
11 **someone's terms of use?**

12 MR. KASNER: Object to form.

13 THE WITNESS: So same --  
14 similar to my -- to my last answer,  
15 having not -- I -- I don't think  
16 breaching terms of use is -- is  
17 inherently ethical or unethical,  
18 particularly without examining said  
19 terms of use.

20 BY MR. DONOGHUE:

21 **Q. Did defendants examine Ryanair's**  
22 **terms of use before accessing its website?**



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1 increased sophistication measures on the part  
2 of the computers who are encountering  
3 CAPTCHA.

4 **Q. All right. Let's move to page 24**  
5 **of Exhibit 418.**

6 **Do you see the first section**  
7 **heading 2.2, Defendants Do Not Deploy, quote,**  
8 **Bad Bots, unquote?**

9 A. I do, yes.

10 **Q. All right. And this is not a**  
11 **primer like the last section, but this is an**  
12 **opinion?**

13 A. This is as opinion, yes.

14 **Q. And there's no citation in this**  
15 **opinion, is there?**

16 A. Not that I see, no.

17 **Q. So it's just your opinion?**

18 A. Yes.

19 **Q. Not based on some third-party**  
20 **source?**

21 A. It's based on my knowledge,  
22 expertise and industry experience.

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1 exploit vulnerabilities, deploy any  
2 malware, deface the website or do  
3 other malicious activities on the  
4 site.

5 BY MR. DONOGHUE:

6 **Q. Would violating the website**  
7 **provider's explicit instruction be malicious?**

8 MR. KASNER: Object to the  
9 form.

10 THE WITNESS: It wouldn't  
11 change the nature of the bot. So  
12 whether -- I think you're getting at  
13 is -- and I'm making a supposition --  
14 more about the behavior of those --  
15 the intent of those operating the bot  
16 or the -- taking the actual action in  
17 the deployment. But it wouldn't  
18 change my view of the nature of the  
19 technical behavior that the bot is  
20 purportedly conducting on the site.

21 BY MR. DONOGHUE:

22 **Q. Well, I'm just using your**

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1 **Q. But it's not based on any**  
2 **knowledge about a cease and desist that**  
3 **Ryanair sent defendants?**

4 A. It is not --

5 MR. KASNER: Object to form.

6 THE WITNESS: It is not based  
7 on that, but that also wouldn't change  
8 the characterization of the type of  
9 bot that would be necessary to conduct  
10 this type of activity. I wouldn't  
11 view any process documents or legal  
12 documents around it to change the  
13 technical nature of it as a tool.

14 BY MR. DONOGHUE:

15 **Q. And is ethicalness not a**  
16 **consideration in this analysis?**

17 MR. KASNER: Object to form.

18 THE WITNESS: It is -- I mean,  
19 I don't believe I have cited  
20 ethicalness as a factor that I  
21 considered. I talked about the intent  
22 not to cause harm, steal data, spam,

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1 **language in your report. It --**

2 A. Um-hmm.

3 **Q. -- says that they're neither**  
4 **malicious in either form or intent.**

5 **So --**

6 A. It's -- and I believe I'm  
7 speaking about the -- the bot itself, the  
8 technical tool here that's being used to  
9 conduct the activity.

10 **Q. The bot has intent?**

11 MR. KASNER: Object to form.

12 THE WITNESS: Purpose.

13 BY MR. DONOGHUE:

14 **Q. The bot -- is it Skynet?**

15 **Sorry. That's maybe not a fair**  
16 **question, nor would it be understandable to**  
17 **everybody.**

18 **But the bot has purpose?**

19 MR. KASNER: Object to form.

20 THE WITNESS: The bot, again,  
21 is not self-thinking. I don't --  
22 not -- not intended to say that. But

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1 the bot has been created with an  
2 intent.

3 My understanding of that intent  
4 is to be able to traverse the public  
5 website and review and aggregate  
6 information that is available to the  
7 public to another population that  
8 might not be looking on that website  
9 themselves.

10 And that intent is one that I  
11 view as non-malicious.

12 BY MR. DONOGHUE:

13 **Q. So it's the intent of whomever  
14 deploys the bot, not the intent of the bot  
15 itself?**

16 A. Well, I was trying to say, but  
17 obviously not fully clearly, that the bot  
18 itself was created by people and that now  
19 that it has been created, it has an intent or  
20 a purpose, a meaning, a -- a goal and  
21 objective. And, again, not -- it's not  
22 self-thinking, but that bot -- what's the

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1 desist letter or terms of use because  
2 those don't have a bearing on the  
3 behavior that they're trying to drive  
4 in the technical tool that they're  
5 using.

6 BY MR. DONOGHUE:

7 **Q. So if defendants had written into  
8 the comments in the code of the bot violate  
9 terms of use, then the bot would have that  
10 intent?**

11 MR. KASNER: Object to form.

12 THE WITNESS: I'll give -- I'll  
13 give you that.

14 BY MR. DONOGHUE:

15 **Q. Thank you. But -- but it's fair  
16 to say that's not what somebody creating a  
17 malicious bot would write into their code,  
18 isn't it?**

19 MR. KASNER: Object to form.

20 THE WITNESS: Quite a bit of --  
21 of leaps I need to take here, but if  
22 you think of -- if you think of

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1 intent of this bot? The intent of this bot  
2 is to go and do these certain behaviors.

3 **Q. So the intent of the bot is  
4 infused in it by whomever creates or deploys  
5 the bot?**

6 MR. KASNER: Object to form.

7 THE WITNESS: Presumably. I'm  
8 comfortable with that, yes.

9 BY MR. DONOGHUE:

10 **Q. And so when defendants disregard  
11 a cease and desist letter, that informs the  
12 intent of their bot?**

13 MR. KASNER: Object to form.

14 THE WITNESS: I don't know that  
15 I fully agree with that, because what  
16 I imagine is into the coding of the  
17 bot is not -- the headline does not  
18 read terms of service, violate terms  
19 of service. Right? They've given it  
20 a directive to perform in a certain  
21 way on the website. And that is  
22 removed from the -- any cease and

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1 commands that we put into technical  
2 tools as -- as being in plain  
3 language, there certainly are  
4 instances where there are direct  
5 coding into a tool to do -- to -- to  
6 do something adversarial.

7 So it might not be as plain as  
8 attack this website or do this thing,  
9 but the coding is clearly designed --  
10 the code will clearly reveal a -- an  
11 intent to do something nefarious.

12 We see this with websites that  
13 are being hit with DDoS traffic,  
14 right? The code of those bots clearly  
15 shows that it is meant to inundate  
16 this website with traffic that is  
17 insurmountable.

18 BY MR. DONOGHUE:

19 **Q. So the intent of the bot is  
20 derived from the code that creates the bot?**

21 MR. KASNER: Object to form.

22 THE WITNESS: The intent is



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1 derived from. The intent could be  
2 interpreted by review of the code.

3 BY MR. DONOGHUE:

4 **Q. But the intent comes from the**  
5 **creator of the bot?**

6 A. Presumably, yes.

7 **Q. Or whomever deploys the bot?**

8 A. Presumably, yes.

9 **Q. And so in the case of defendants,**  
10 **a cease and desist letter warning not to use**  
11 **the Ryanair website could make a bot bad that**  
12 **was otherwise good?**

13 MR. KASNER: Object to form.

14 THE WITNESS: I think I tend to  
15 disagree with this. And I've said it  
16 a few different ways, but I'll -- I'll  
17 try again, that I do not believe that  
18 the purpose of a technology like the  
19 one in question that I don't have a  
20 lot of technical information about  
21 seems to be in any way informed by the  
22 contextual items that you're

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1 W-A-I-T --

2 MS. REPORTER: Okay.

3 MR. DONOGHUE: Separate word  
4 S-E-R-V-E-R.

5 THE WITNESS: So there are  
6 quite a few analogies for APIs and we  
7 certainly wrestled with which was the  
8 best and most obvious to include. But  
9 this is the one that we went with.

10 And the interaction between you  
11 looking at the website, interacting  
12 with the website in the back end  
13 really has a fair amount of parallels  
14 to the setting of being in a  
15 restaurant.

16 So you are in a restaurant.  
17 You review the menu. The wait server  
18 takes your order and gives it to the  
19 kitchen. So the menu in this instance  
20 is the API. You are looking at it,  
21 but you are going to be interacting  
22 with another party.

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1 mentioning, terms of use, a cease and  
2 desist order.

3 It seems to me it has a very  
4 specific purpose, which is to review  
5 and aggregate fares. And that purpose  
6 does not, in my view, seem to  
7 implicate these other contextual data  
8 points.

9 BY MR. DONOGHUE:

10 **Q. All right. Let's move to**  
11 **Section 2.3.1, still on page 24. It's an API**  
12 **Introduction heading.**

13 A. Yes.

14 **Q. The second paragraph you have**  
15 **what you refer to as a simple analogy, but I**  
16 **need help to understand it.**

17 **Can you explain the wait server**  
18 **analogy?**

19 A. Certainly. So --

20 MS. REPORTER: I'm sorry. What  
21 was that?

22 MR. DONOGHUE: Wait server,

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1 So those two pieces have an  
2 interplay together, which sends  
3 commands from -- from you to the  
4 server to the kitchen, directs people  
5 to prepare the food, present the food  
6 and have the food returned to your  
7 table.

8 So you are often interacting  
9 with a -- what would be considered a  
10 back end API when you are having a  
11 forward experience with a website  
12 that's allowing commands to be  
13 directed such that you have the  
14 desired outcomes without you having to  
15 enter code to communicate directly  
16 with the website.

17 BY MR. DONOGHUE:

18 **Q. All right. And does the bot have**  
19 **a place in this analogy?**

20 A. So a bot is no different than a  
21 user interacting with the interface.

22 **Q. Okay.**

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1 put it in their own testimony.

2 BY MR. DONOGHUE:

3 **Q. So a determination of ethical**  
4 **behavior is whether it's generally socially**  
5 **acceptable?**

6 MR. KASNER: Object to form.

7 THE WITNESS: Could you say  
8 it -- could you repeat it back?  
9 Sorry.

10 BY MR. DONOGHUE:

11 **Q. The determination of what is**  
12 **ethical is whether it's generally socially**  
13 **acceptable behavior?**

14 MR. KASNER: Object to form.

15 THE WITNESS: I think that it's  
16 probably much broader and I was trying  
17 to boil down something that has a lot  
18 of complications to it related to  
19 values and -- and belief systems.

20 But for the construct of the --  
21 an ethical bot, as I laid it out here,  
22 talking about a good bot generally

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1 described. I'm not saying that the  
2 definition of ethical is  
3 non-malicious, but I think it works  
4 well to describe the characteristics  
5 of good bots.

6 BY MR. DONOGHUE:

7 **Q. Why does it matter that Navitaire**  
8 **is a subsidiary of Amadeus?**

9 MR. KASNER: Object to form.

10 THE WITNESS: It matters in the  
11 construct of the -- the GDS platform.  
12 Navitaire is a subsidiary of a -- of a  
13 major GDS and thus making that  
14 mechanism of the interplay of how the  
15 bookings are constructed an important  
16 part of Ryanair's ecosystem.

17 BY MR. DONOGHUE:

18 **Q. Because Ryanair has contracts**  
19 **with a GDS, does Ryanair have to allow OTAs**  
20 **to sell its flights?**

21 MR. KASNER: Object to form.

22 THE WITNESS: The -- the

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1 performing ethical activities, and  
2 the -- the juxtaposition that I  
3 offered to you when we first started  
4 talking about this was that these were  
5 activities that were non-malicious --  
6 I mean, ethical activities being  
7 non-malicious, I think that construct  
8 works. So I think that one's better  
9 to stick with.

10 But conceptually in the system  
11 that's been put in place by Ryanair,  
12 these are non-malicious activities  
13 that are very welcomed and very  
14 permissible in the technical  
15 configuration that they've put  
16 forward.

17 BY MR. DONOGHUE:

18 **Q. So ethical means non-malicious?**

19 MR. KASNER: Object to form.

20 THE WITNESS: I think I've  
21 offered quite a few suggestions of  
22 the -- the parallels of how it can be

281

1 if-then suggestion there does not  
2 work, but it does tie back in to the  
3 technical nature of this opinion,  
4 which is that they have to inherently  
5 create an environment that invites  
6 access from nonhuman users in order to  
7 make these partnerships that they have  
8 celebrated a successful part of their  
9 ecosystem.

10 BY MR. DONOGHUE:

11 **Q. So because Ryanair invites**  
12 **nonhuman GDS traffic, it also has to invite**  
13 **OTA traffic?**

14 MR. KASNER: Object to form.

15 THE WITNESS: Not because of  
16 that. But it has to operate a  
17 technical environment that opens  
18 itself to that type of traffic.

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BY MR. DONOGHUE:

**Q. Going to page 27 of Exhibit 418, your report, the second full paragraph begins, Ryanair's efforts to selectively ban defendants, which by cybersecurity definition employ good bots is ineffective.**

**Do you see that?**

A. Yes.

**Q. So defendants use good bots to access the Ryanair website; is that right?**

A. So I've said it before but I'll

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just caveat it again. Not -- I do not fully understand the nature of the automation or if there is automated behavior that is happening by the third party to access Ryanair, because that information has not been made available.

That said, the nature of the activity that's happening here I understand generally and I characterize as good bot activity from my cybersecurity experience.

**Q. And what did you do to find out what bots defendants employ to access the Ryanair website?**

MR. KASNER: Object to form.

THE WITNESS: I did not examine that issue as it wasn't needed to understand the opinions about the website itself.

BY MR. DONOGHUE:

**Q. You didn't need to understand the bots that are used to access the Ryanair website to determine whether they were good or bad?**

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MR. KASNER: Object to form.

THE WITNESS: Correct.

BY MR. DONOGHUE:

**Q. But don't we determine whether a bot is ethical based on its code, in part?**

MR. KASNER: Object to form.

THE WITNESS: The code drives the behavior of what -- the operation of the bot. And while I don't have access to the evidence or information that maps specifically how this robot process works, I do generally understand the nature of what is happening when either the defendants or others are inside the myRyanair environment from both my own review, but also through the depositions of others who have spoken specifically about bots operating in the environment.

And I could draw that characterization without asking

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additional questions about the underlying code of the bot.

BY MR. DONOGHUE:

**Q. So you don't need to see the actual bots that defendants used to know whether they're ethical?**

MR. KASNER: Object to form.

THE WITNESS: Obviously the more complete information that one could have the better. But the code is only going to demonstrate what the bot does. And I believe I have adequate knowledge of what the bot does to make a supposition about how it's behaving in the myRyanair environment.

BY MR. DONOGHUE:

**Q. So you don't know what bots defendants use, right?**

MR. KASNER: Object to form.

THE WITNESS: Correct. I do not understand fully the process flow,

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1 underlying technology of the third  
2 party that engages directly with  
3 Ryanair.

4 BY MR. DONOGHUE:

5 **Q. But you know enough to make a**  
6 **determination that the bots are good?**

7 MR. KASNER: Object to form.

8 THE WITNESS: I do. As I said  
9 before, the good bot/bad bot  
10 distinction is one that's relatively  
11 broad and that we largely look at the  
12 purpose and intent of the bot. And I  
13 do believe that the information I have  
14 is enough to understand such purpose  
15 and intent and to make that  
16 characterization.

17 BY MR. DONOGHUE:

18 **Q. Even though you don't know**  
19 **exactly what the bot is?**

20 MR. KASNER: Object to form.

21 THE WITNESS: Correct.  
22

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1 slight bit of assumption there, that  
2 the code is done correctly and that  
3 it's not behaving in a way different  
4 than intended by the programmers, but  
5 I'm comfortable with that.

6 BY MR. DONOGHUE:

7 **Q. So you could get the intent from**  
8 **defendants on the one end and on the other**  
9 **end you could see how the bots interact with**  
10 **the website and you could derive the answer**  
11 **from that?**

12 MR. KASNER: Object to form.

13 THE WITNESS: And which answer  
14 would I be deriving?

15 BY MR. DONOGHUE:

16 **Q. Whether the bots are good bots,**  
17 **ethical bots.**

18 MR. KASNER: Object to form.

19 THE WITNESS: Yes. And I think  
20 obviously we would need to speak to  
21 the third party that is deploying the  
22 tools, rather than the defendants.

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1 BY MR. DONOGHUE:

2 **Q. And even though you've never seen**  
3 **the bot's code?**

4 MR. KASNER: Object to form.

5 THE WITNESS: Correct.

6 BY MR. DONOGHUE:

7 **Q. And even though whether or not a**  
8 **bot is ethical is derived at least in part**  
9 **from the code?**

10 MR. KASNER: Object to form.

11 THE WITNESS: So I think that  
12 might be a slight misstatement of my  
13 original point, which I'm sure will be  
14 slightly aggravated for me to go  
15 through again.

16 But the code drives the  
17 purpose. And intent is behind the  
18 authors of the code who drive the  
19 purpose. So once I see the purpose,  
20 if the bot is operating as intended,  
21 then I can -- I don't necessarily need  
22 to see the middle piece. There's a

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1 BY MR. DONOGHUE:

2 **Q. The third party and the**  
3 **defendants?**

4 A. I said rather than the  
5 defendants.

6 **Q. So you have to speak to the third**  
7 **party, not the defendants?**

8 A. Correct.

9 **Q. Did you ask to speak to the third**  
10 **party?**

11 A. I did not.

12 MR. KASNER: Object to form.

13 BY MR. DONOGHUE:

14 **Q. Why not?**

15 MR. KASNER: Object to form.

16 THE WITNESS: Not necessary to  
17 understand the -- again, the -- the  
18 general sense of the desired activity,  
19 the outcome of the desired activity.  
20 I believe that is adequate to -- I  
21 actually believe that the -- observing  
22 the outcome of the behavior, even

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1 if -- even at a generic level, which  
 2 is the case here, is adequate to  
 3 understand the behavior of the bot,  
 4 which tells me how it's interacting  
 5 with the permissions of the  
 6 environment that it's operating in.

7 BY MR. DONOGHUE:

8 **Q. So it's really all about**  
 9 **operating within the permissions of the**  
 10 **website?**

11 MR. KASNER: Object to form.

12 THE WITNESS: The technical  
 13 permissions, yes.

14 BY MR. DONOGHUE:

15 **Q. It has nothing really to do with**  
 16 **the intent of whomever deployed the bot?**

17 MR. KASNER: Object to form.

18 THE WITNESS: Well, typically  
 19 the behavior is -- at least -- is  
 20 directly tied to the intent.

21 BY MR. DONOGHUE:

22 **Q. What if the intent was to violate**

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1 it's necessary to, one, my  
 2 understanding of the operation of the  
 3 bot and then, two, the level of depth  
 4 of information I needed to have to  
 5 form the opinion that we have here.

6 So it's not as though I avoided  
 7 accessing that information. I just  
 8 didn't -- I didn't believe and  
 9 continue to not believe that it was  
 10 needed to understand this open access  
 11 environment that Ryanair has created.

12 BY MR. DONOGHUE:

13 **Q. Do you know whether the bots**  
 14 **employed by defendants use myRyanair**  
 15 **account information to purchase Ryanair**  
 16 **flights?**

17 MR. KASNER: Object to form.

18 THE WITNESS: It's my  
 19 understanding that one has to have a  
 20 myRyanair account to make a booking  
 21 and there are not exceptions to that.  
 22 And I understand that from

291

1 **a cease and desist letter?**

2 MR. KASNER: Object to form.

3 THE WITNESS: Well, I -- I  
 4 think we've -- we've covered this in  
 5 that you would not see a piece of code  
 6 that would have something so generic  
 7 as go out and violate this, right?

8 There has to be --

9 BY MR. DONOGHUE:

10 **Q. Which is why you would speak to**  
 11 **the person that deployed the bot or the**  
 12 **entity that deployed the bot, right? That's**  
 13 **what we were talking about before.**

14 A. Um-hmm.

15 MR. KASNER: Object to form.

16 BY MR. DONOGHUE:

17 **Q. But you don't want to do that**  
 18 **because you never bothered to ask about the**  
 19 **intermediaries?**

20 MR. KASNER: Object to form.

21 THE WITNESS: It's not so much  
 22 that. It's just that I don't think

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1 myRyanair's -- Ryanair's information  
 2 that it has provided. So it stands to  
 3 reason that the bookings must be made  
 4 using a myRyanair account.

5 BY MR. DONOGHUE:

6 **Q. All right. Why don't we go to**  
 7 **page 28, Section 2.4.**

8 **Do you see that heading,**  
 9 **Ryanair's Bot-banning strategy --**

10 A. Um-hmm.

11 **Q. -- and some more stuff there?**

12 **And you're talking about**  
 13 **Ryanair's SHIELD solution.**

14 A. Yes.

15 **Q. Do you know who created SHIELD?**

16 MR. KASNER: Object to form.

17 THE WITNESS: It's my  
 18 understanding that SHIELD is an  
 19 in-house tool that previously had  
 20 another name that's been developed by  
 21 Ryanair.  
 22



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BY MR. DONOGHUE:

**Q. And do you know whether, when Booking.com makes a Ryanair flight purchase for a Booking.com customer, it accesses the ryanair.com website once or multiple times?**

MR. KASNER: Object to form.

THE WITNESS: How such a transaction takes place and the technical details there I do not have specific data and evidence about how that takes place.

BY MR. DONOGHUE:

**Q. Did you ask Booking.com for that information?**

MR. KASNER: Object to form.

THE WITNESS: I did not.

BY MR. DONOGHUE:

**Q. Did you ask KAYAK for that information?**

MR. KASNER: Object to form.

THE WITNESS: I did not.

Again, to take it back, I don't think

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it is relevant or necessary to form the opinions I have here.

BY MR. DONOGHUE:

**Q. Did you ask Priceline for that information?**

MR. KASNER: Object to form.

THE WITNESS: I did not.

BY MR. DONOGHUE:

**Q. Did you ask Agoda for that information?**

MR. KASNER: Object to form.

THE WITNESS: I did not.

BY MR. DONOGHUE:

**Q. Have you looked at the linked out flight data?**

MR. KASNER: Object to form.

THE WITNESS: I have reviewed opposing counsel's expert's rebuttal report that speaks to the linked out data at a high level.

BY MR. DONOGHUE:

**Q. Did you ask to see the linked out**

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**data specifically?**

MR. KASNER: Object to form.

THE WITNESS: I did not, although I did discuss or did ask counsel for some clarification of that data upon seeing it in the opposing counsel's expert rebuttal report. I understand it was very recently received and I have not had time to request and add it to an analysis, if needed.

But to be clear, I do not think it would change the opinions that I've stated here in this particular section we're talking about, attributed harm, and I think that the sections even before this made quite clear that there is no way to do -- to show attributed harm.

BY MR. DONOGHUE:

**Q. What clarifications did you request from counsel?**

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MR. KASNER: Objection, calls for privileged information. I can instruct the witness to respond at a high general level, if -- if she can.

THE WITNESS: At a high general level, having not seen linked out bookings previously, I asked for some information about what that referred to and we spoke very briefly about what that information was.

BY MR. DONOGHUE:

**Q. So you received the clarifications you requested?**

A. Yes.

**Q. Turning to page 41 of Exhibit 418, your initial report, there's a heading, Overall Takeaways.**

**Do you see that?**

A. Yes.

**Q. The second paragraph you refer to evidence of technical harm.**

**Do you see that?**

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1 A. Yes.

2 **Q. What does technical harm mean?**

3 A. In this instance it would mean  
4 a -- a -- a notable damage, a technical  
5 impact to a system from which some type of  
6 recovery would be necessary.

7 **Q. Notable damage or a technical**  
8 **impact to the a system from which some type**  
9 **of recovery would be necessary; is that**  
10 **right?**

11 A. Yes.

12 **Q. What is notable damage?**

13 A. Some type of outcome that impacts  
14 a network or system's ability to operate in  
15 the way it is intended.

16 **Q. So would the website going down**  
17 **be notable damage?**

18 MR. KASNER: Objection to form.

19 THE WITNESS: It could be.

20 BY MR. DONOGHUE:

21 **Q. Would the website being slowed be**  
22 **notable damage?**

1 MR. KASNER: Objection to form.

2 THE WITNESS: It could be.

3 BY MR. DONOGHUE:

4 **Q. I'm going to move to the rebuttal**  
5 **report. We can take a break if you want or**  
6 **we can keep going.**

7 **Do you have a preference?**

8 A. I'm fine if you -- I'm fine.

9 MR. KASNER: We can start for a  
10 bit, five -- we can five, 10 minutes,  
11 whenever it feels natural. Maybe  
12 10 minutes we take a break.

13 MR. DONOGHUE: Why don't we  
14 just take a break now instead of --

15 MR. KASNER: Okay.

16 MR. DONOGHUE: -- taking a  
17 break in 10 minutes.

18 MR. KASNER: Okay.

19 VIDEO OPERATOR: The time is  
20 now 4:34. We are off the record.

21 (Thereupon, a brief recess was  
22 taken.)

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1 (Exhibit 419 was marked for  
2 identification.)

3 VIDEO OPERATOR: The time is  
4 now 4:46. We are back on the record.

5 BY MR. DONOGHUE:

6 **Q. All right. You've been handed**  
7 **what's marked as Exhibit 419.**

8 **Do you recognize this document?**

9 A. Yes, I do.

10 **Q. What is it?**

11 A. This is my rebuttal report to my  
12 initial report response submitted last  
13 Friday.

14 **Q. And since you submitted it last**  
15 **Friday, any changes to your opinions?**

16 A. No.

17 **Q. Going to page 8 of Exhibit 419,**  
18 **your rebuttal report, there's a Section 1.1**  
19 **about firewalls.**

20 **Do you see that?**

21 A. Yes.

22 **Q. And there -- below that there's,**

1 **I guess, a subheading, Firewall explained.**

2 A. Yes.

3 **Q. We've talked a little bit about a**  
4 **firewall, but just to confirm, can a firewall**  
5 **be a gate?**

6 A. So a firewall is -- is very much  
7 a technical term that individuals are  
8 constantly using in the world of describing  
9 cybersecurity environments. Firewalls are --  
10 are -- firewalls are used to modulate in and  
11 out traffic on a website or environment.

12 So a firewall could be configured  
13 in such a way that one might characterize it  
14 as a gate, but it is not inherently a gate.

15 **Q. So a firewall could be used as a**  
16 **gate?**

17 MR. KASNER: Object to form.

18 THE WITNESS: It could -- it  
19 could be used, although it wouldn't be  
20 the typical technical measure that one  
21 would think to use in such a way.  
22





CERTIFICATE OF NOTARY

I, MISTY KLAPPER, the officer before whom the foregoing deposition was taken, do hereby certify that the witness whose testimony appears in the foregoing deposition was duly sworn by me; that the testimony of said witness was taken by me in shorthand and thereafter reduced to typewriting by me; that said deposition is a true record of the testimony given by said witness; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken; and, further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Misty Klapper, RMR, CRR, CSR  
Notary Public in and for the  
District of Columbia

DEPOSITION OF: JORDAN RAE KELLY

DATE OF DEPOSITION: Tuesday, October 4, 2023

CASE: *Ryanair DAC v. Booking Holdings Inc., et al*, Case No. 20-1191-WCB**ERRATA SHEET**

The following are the corrections which I have made to my deposition transcript:

<b>Pg.</b>	<b>Ln.</b>	<b>Now Reads</b>	<b>Should Read</b>	<b>Reason</b>
148	15-17	footnote 20, At what point . . . visitor's preference.	footnote 20, "At what point . . . visitor's preference."	Transcription
206	2-3	Strict access to	Strictly – access to	Transcription

I, the undersigned, declare under penalty of perjury, that I have read the above-referenced deposition transcript and have made any corrections, additions or deletions reflecting my true and correct testimony.

EXECUTED this 16 day of November 2023, at Lewisville, Texas.

Jordan Rae Kelly  
Jordan Rae Kelly

# EXHIBIT 37

**PUBLIC VERSION - CONFIDENTIAL MATERIAL OMITTED**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE  
CASE NO.: 20-1191-LPS

- - - - - x

RYANAIR DAC,

Plaintiff,

- against -

BOOKING HOLDINGS INC,. BOOKING.COM B.V.,  
KAYAK SOFTWARE CORPORATION, PRICELINE.COM  
LLC, and AGODA COMPANY PTE, LTD.,

Defendants.

- - - - - x

CONFIDENTIAL ATTORNEYS' EYES ONLY  
VIDEOTAPE ZOOM DEPOSITION OF  
BASIL IMBURGIA

October 13, 2023  
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VIDEOTAPE ZOOM VIDEOCONFERENCE ORAL  
DEPOSITION OF BASIL IMBURGIA, pursuant to Notice,  
commencing October 13, 2023, at 9:35 a.m., on the  
above date, before Catherine M. Donahue, a  
Certified Court Reporter and Notary Public in the  
State of New Jersey.

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A P P E A R A N C E S:  
(All parties present via Zoom Remote)

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ALSO PRESENT:  
Tyler Crotty, Videographer

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October 13, 2023

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## E X H I B I T S

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420	Curriculum vitae of Basil Imburgia	12
421	Expert Rebuttal Report and Disclosure of Basil Imburgia	95
422	statutory text of the Computer Fraud & Abuse Act	157
423	text of the Computer Fraud & Abuse Act	160
424	Document bearing Bates No. RYANAIR-BOOKING 0063234	248
425	Lopata report	273
426	Supplemental expert rebuttal report of Basil Imburgia dated October 10, 2023	297

(Exhibits retained by counsel.)

<p style="text-align: right;">6</p> <p>1 DEPOSITION SUPPORT INDEX</p> <p>2</p> <p>3 Instruction To Witness Not To Answer</p> <p>4 PAGE LINE</p> <p>5 None Marked</p> <p>6 Request for Production of Documents</p> <p>7 PAGE LINE</p> <p>8 None Marked</p> <p>9</p> <p>10 Marked Text</p> <p>11 PAGE LINE</p> <p>12 None Marked</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">7</p> <p>1 THE VIDEOGRAPHER: Good morning.</p> <p>2 We are now on the record. This</p> <p>3 begins the video deposition of Basil</p> <p>4 Imburgia in the matter of Ryanair DAC v.</p> <p>5 Booking Holdings Inc., et al.</p> <p>6 Today is October 13, 2023 and the</p> <p>7 time is approximately 9:35 a.m.</p> <p>8 This deposition is being taken</p> <p>9 remotely via Zoom. The videographer is</p> <p>10 Tyler Crotty of Magna Legal Services and</p> <p>11 the court reporter is Catherine Donahue,</p> <p>12 also of Magna.</p> <p>13 Counsel, could you please state</p> <p>14 your appearances and who you represent</p> <p>15 for the record?</p> <p>16 MR. OLIVER: My name is William</p> <p>17 Oliver with Holland &amp; Knight, and I'm</p> <p>18 representing Ryanair DAC.</p> <p>19 MR. KASNER: My name is Alexander</p> <p>20 J. Kasner of Cooley LLP representing</p> <p>21 defendants.</p> <p>22 I also have with me Mr. John</p> <p>23 Hemann of Cooley LLP representing</p> <p>24 defendants.</p> <p>25 THE VIDEOGRAPHER: Thank you,</p>
<p style="text-align: right;">8</p> <p>1 Counsel.</p> <p>2 Could our court reporter please</p> <p>3 swear in the witness.</p> <p>4 (The witness is sworn by the</p> <p>5 court reporter.)</p> <p>6 B A S I L I M B U R G I A, called as a</p> <p>7 witness by (Plaintiff), having been first</p> <p>8 duly sworn by Catherine M. Donahue, a</p> <p>9 Notary Public within and for the State of</p> <p>10 New Jersey, was examined and testified as</p> <p>11 follows:</p> <p>12 EXAMINATION BY MR. OLIVER:</p> <p>13 <b>Q. Good morning, Mr. Imburgia.</b></p> <p>14 <b>Would you please spell your full</b></p> <p>15 <b>name for the record?</b></p> <p>16 A. Yes. The first name is B-a-s-i-l.</p> <p>17 The last name is I-m-b-u-r-g-i-a.</p> <p>18 <b>Q. Have you been deposed before today?</b></p> <p>19 A. Yes.</p> <p>20 <b>Q. About how many times?</b></p> <p>21 A. Probably, I would guess about 60, 65</p> <p>22 times.</p> <p>23 <b>Q. Have you also testified at trial?</b></p> <p>24 A. Yes.</p> <p>25 <b>Q. About how many times?</b></p>	<p style="text-align: right;">9</p> <p>1 A. I would guess about 40 times at</p> <p>2 trial.</p> <p>3 <b>Q. And was that as an expert witness?</b></p> <p>4 A. Yes.</p> <p>5 <b>Q. So I would like to go over some</b></p> <p>6 <b>ground rules, although you're probably very well</b></p> <p>7 <b>aware of them.</b></p> <p>8 <b>I'm going to ask some questions and</b></p> <p>9 <b>you'll be answering them under oath.</b></p> <p>10 <b>Do you understand that?</b></p> <p>11 A. Yes.</p> <p>12 <b>Q. We have a court reporter here</b></p> <p>13 <b>transcribing everything we say. So it is</b></p> <p>14 <b>important that we do not talk over each other.</b></p> <p>15 <b>Do you understand that?</b></p> <p>16 A. Yes.</p> <p>17 <b>Q. And clearly, you already understand</b></p> <p>18 <b>this, but you have to give a "yes" or "no"</b></p> <p>19 <b>answer as opposed to nonverbal answers.</b></p> <p>20 <b>Do you understand that as well?</b></p> <p>21 A. Yes.</p> <p>22 <b>Q. Your counsel may object from time to</b></p> <p>23 <b>time, which he is entitled to. But unless he</b></p> <p>24 <b>instructs you not to answer, you need to answer</b></p> <p>25 <b>my questions.</b></p>

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1 I probably review about 25 to 30  
2 senior managing directors as a performance  
3 reviewer. I handle aspects of conflict issues  
4 that may pop up from our conflicts department.

5 I'm the designated person for the  
6 forensic and litigation group in dealing with  
7 some conflict issues. I deal with compensation,  
8 raises, bonuses, things like that.

9 BY MR. OLIVER:

10 **Q. So you said you have a**  
11 **responsibility for 20 to 30 reviewers.**  
12 **Are they your direct reports?**

13 A. They could be -- well, I'm a  
14 performance manager for them. So in our system,  
15 I would be their direct report.

16 But sometimes I may review an  
17 individual that's in a product that may report  
18 to their product leader as well as report to me  
19 as the North American leader.

20 **Q. How many direct reports do you have?**

21 A. The people I review as a performance  
22 manager, 25 or so. So it is probably about 25,  
23 30 maybe.

24 **Q. And when you say reviewers, can you**  
25 **explain what those individuals do?**

36

1 introduction to the Cooley team.

2 **Q. So you said Ms. Kelly was looking**  
3 **for a damages expert.**

4 **Is that generally why people would**  
5 **come to you for work?**

6 MR. KASNER: Object to the form.

7 A. Well, let me clarify that.  
8 Cooley was looking for a damages  
9 expert. Jordan just passed on my information to  
10 Cooley.

11 But typically the things that I'm  
12 doing are forensic accounting, economic damage  
13 calculations, investigative work or really  
14 neutral arbitration work. I've probably been a  
15 neutral over 35 times. Working capital.

16 Those, those are the kinds of things  
17 that I'm typically working on.

18 BY MR. OLIVER:

19 **Q. So looking at the second full**  
20 **sentence of your CV, it says you have over 30**  
21 **years of experience in providing forensic**  
22 **accounting and financial and economic analysis**  
23 **to attorneys in litigation/arbitration.**

24 **Do you see that?**

25 A. Yes.

35

1 MR. KASNER: Object to the form.

2 A. I would say generally they're either  
3 people that do investigative work, people that  
4 do litigation work.

5 I do review some people that do data  
6 analytics work. I review people that do trial  
7 graphics and trial services work because there's  
8 a lot of products in North America. I cross  
9 different products, I guess.

10 So those are the ones that I can  
11 recall.

12 BY MR. OLIVER:

13 **Q. Do you work with Ms. Jordan Kelly?**

14 MR. KASNER: Object to the form.

15 A. I don't work with Jordan. She works  
16 in our cyber practice and she reports to Anthony  
17 Ferrante. She doesn't report to me.

18 BY MR. OLIVER:

19 **Q. Are you aware that she is also an**  
20 **expert in this case?**

21 A. Yes. Her and her senior director, I  
22 think, contacted us when Cooley was looking for  
23 a damages expert, and that's how I got involved.

24 But that was as much of my  
25 communications with her. It was kind of the

37

1 **Q. Do you see that you have a backslash**  
2 **there on your CV?**

3 A. Yes.

4 **Q. Is there any reason you use a**  
5 **backslash as compared to a forward slash**  
6 **throughout the rest of your CV?**

7 MR. KASNER: Object to the form.

8 A. No.

9 BY MR. OLIVER:

10 **Q. You don't know why it is a different**  
11 **type of slash?**

12 MR. KASNER: Object to the form.

13 A. No, I don't.

14 BY MR. OLIVER:

15 **Q. So let's look at the second**  
16 **paragraph here.**

17 It says you have advised on matters  
18 involving accounting and auditing issues,  
19 patent, false advertising and trademark.

20 Then it goes on with all these other  
21 areas of your expertise.

22 **Do you see where I'm looking?**

23 A. Yes.

24 **Q. What kind of patent cases have you**  
25 **worked on?**

38

MR. KASNER: Object to the form.  
 A. I guess the ones that I can remember -- platinum-tip spark plugs was one. LCDs was another. I think another one dealt with some kind of valves. Roofing tiles.  
 Those are the ones I can recall.

BY MR. OLIVER:

**Q. Have you done any patent work related to software?**

MR. KASNER: Object to the form.

A. I did a matter that dealt with matching software. It dealt with a pharmaceutical product that I was calculating profits relating to or forcing profits relating to the matching software.

I'm not sure if that was -- I'm not sure if that was a patent case or a copyright case because a lot of the technology cases -- like I've worked on software implementation projects where I'm doing the damages relating to, you know, a misapplication of software if there's a new system put in place and there were problems with that system.

I've calculated the different types of damage relating to system implementation. I

40

So part of that, dealing with prescriptions and things like that, they want to make sure that they're like de-duping the data. So there's matching software to make sure if the doctors' names are reversed and things like that, that they're matched and eliminated so they're not, you know, counting more than once a certain prescription for a certain pharmaceutical.

So the matching software was designed to kind of eliminate duplications, in essence.

**Q. And apologies if you already said this, but what was your role in helping this case with the matching software for the pharmaceutical company?**

A. It was to calculate damages. And the damages were -- there were claims for profits, and I did an apportionment analysis.

I also did a royalty study comparing the royalty -- the amounts paid for the software and what those would be, what the comparable companies would be.

So it was kind of like a royalty analysis and a profits analysis, as well.

39

have worked on another software case that dealt with some developers not, not getting their fair portion of the license fees and things like that.

So, I don't know if the patent cases dealt with -- I think most of them were copyright related, if I remember. It could have been a patent. Some of them could have been patent related.

BY MR. OLIVER:

**Q. Okay.**

**So you provided examples there of just your general technology experience with software; is that fair?**

A. Yes, some of the software cases that I remember working on the damage aspect of.

**Q. Can you explain what matching software is?**

A. This was pharmaceutical data. So a lot of times the pharmaceutical companies give to -- I think my client, I think it is ITU now. It used to be IMS.

Basically what they do is compile all the pharmaceutical sales and then they, they spit them back out to their customers.

41

**Q. You mentioned one of your experiences with software related to software implementation.**

**Can you explain what your role with that project was?**

A. Yes.

That was back a long time, Coopers & Lybrand. And I was a damages expert, and we had a management consulting partner. One of my partners that was a systems implementation expert. So he dealt with like the liability aspects of the problems with the implementation.

And what I did is I did the damage analysis in relation to the implementation which dealt with, you know, when the system was down; what kind of lost profits were there, compilation of what the repair costs were, what the replacement costs were.

So it was investigating those kinds of things.

**Q. You explained you were doing the damage analysis.**

**Can you explain a little bit more what the damage analysis is used for?**

MR. KASNER: Object to the form.



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1 A. So if the case is about a vendor's  
2 inappropriate actions or not complying with a  
3 contract, the court will have experts  
4 potentially deal with liability issues that are  
5 in the industry.

6 And so, I would typically be  
7 presenting, if liability is found, what the  
8 damages were.

9 So, you know, you look at a but-for  
10 world and you say but for the plaintiff's  
11 action -- defendant's, excuse me, actions, how  
12 would the -- how would the profitability, cost,  
13 revenues, profitability change.

14 And so, there were aspects that I  
15 looked at to see if, when there were shutdowns  
16 of certain plants, you know, did the company  
17 lose profits or were they able to mitigate those  
18 losses.

19 And so, that was one aspect that I  
20 kind of reviewed.

21 And then, if the system ultimately  
22 was pulled out and not used and had to be  
23 repaired for a brief period of time and then had  
24 to be fully replaced, I did a compilation of the  
25 costs relating to repair and replacement by

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1 investigative work relating to, for example -- I  
2 can give you examples, like, that I would think  
3 about.

4 Like I worked on the Merrill Lynch  
5 Orange County litigation, and that litigation  
6 dealt with a number of derivative products that  
7 were sold by Merrill Lynch to Orange County.

8 And so, there was issues around  
9 suitability of those derivative products. And  
10 derivative products are, you know -- you can  
11 take a bond and slice it into all different  
12 pieces and have interest only and have just a  
13 balloon payment at the end.

14 And what a lot of these investment  
15 banks do, is they'll take a product and they'll,  
16 you know -- derivative products are being  
17 derived from one regular bond and they're  
18 basically, you know, developing products that  
19 are derived from a regular bond.

20 Or it even could be some kind of  
21 equities that they're doing with a product. So  
22 it really deals with those kinds of products.

23 **Q. Okay. Thank you.**

24 **You have a section here on the list**  
25 **that says valuation of entities.**

43

1 looking at, you know, summarizing all the  
2 invoices that were spent and relating to repairs  
3 and all the invoices relating to, you know,  
4 system replacement. Things like that.

5 BY MR. OLIVER:

6 **Q. And ultimately would your client be**  
7 **seeking to recover those damages?**

8 MR. KASNER: Object to the form.

9 A. Yes.

10 That's the purpose of it, is if the  
11 vendor or supplier is found liable, then it  
12 would be, okay, what are the harms relating to  
13 that liability.

14 BY MR. OLIVER:

15 **Q. And when you say harms, financial**  
16 **harm; is that correct?**

17 A. It is economic damage relating to  
18 the, relating to the issues of the case.

19 **Q. So moving through that first**  
20 **sentence still in the second paragraph, you used**  
21 **the phrase derivative products in banking**  
22 **litigation.**

23 **What do you mean by derivative**  
24 **products in banking litigation?**

25 A. What that would be is litigation and

45

1 **What type of entities are you**  
2 **referring to?**

3 A. It is probably all different types  
4 of business valuations from companies that  
5 manufacture pallets.

6 I mean, it is a little difficult for  
7 me to remember them all because I do a lot of  
8 rep and warranty cases for insurance carriers.

9 So if a buyer has a rep and warranty  
10 insurance claim -- a rep and warranty insurance  
11 policy, I should say, the buyer will go to the  
12 insurance carrier and say my business was  
13 misvalued by a certain amount.

14 And I would go in and analyze the  
15 information that's been put forth by the buyer.  
16 I'll look at the valuation models. So a lot of  
17 it is me overlaying the issue and revaluing the  
18 company.

19 So, I'm just trying to think --  
20 there have been all different types of  
21 companies, financial services companies,  
22 companies in the gas turbines of power plants  
23 that I have done that kind of work for;  
24 retailers that I have done that kind of work  
25 for. You know, waste energy plants.

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1 MR. KASNER: Object to the form.  
2 A. They were an audit client of mine.  
3 Financial statements.

4 BY MR. OLIVER:

5 **Q. Okay.**

6 **So let's move over to the fourth**  
7 **page, I believe, where it says additional**  
8 **professional education.**

9 **Do you see that?**

10 A. Yes.

11 **Q. And these are education that you**  
12 **have received from other entities; is that**  
13 **correct?**

14 MR. KASNER: Object to the form.

15 A. You know, I'm looking at them and I  
16 mean, the paragraph up top, like where it talks  
17 about various sponsored training programs  
18 covering forensic accounting audit topics and  
19 things like that, a lot of those were things  
20 that I attended.

21 But then probably after that when it  
22 talks about Lotus 123, fraud training, and then  
23 all the other things I think are things that I  
24 either co-presented on or actually presented on.  
25 So I was actually an instructor.

84

1 A. Probably 500 or more.

2 **Q. And so, for these topics that you're**  
3 **training, you would be considered the subject**  
4 **matter expert for them?**

5 MR. KASNER: Object to the form.

6 A. Yes, the firm would ask me to  
7 present on it because I am subject matter  
8 expert.

9 There are other subject matter  
10 experts in the same areas of the firm. I'm not  
11 the only one. Sometimes I'll co-present. But  
12 they're asking me because it is one of the areas  
13 of my expertise, typically.

14 BY MR. OLIVER:

15 **Q. And so, your areas of expertise**  
16 **could be generally summarized as what's listed**  
17 **in the professional experience litigation and**  
18 **investigation section on the second page?**

19 MR. KASNER: Object to the form.

20 A. I mean, that might not be  
21 everything. As I said, there are other aspects  
22 discussed throughout this resume, but those are  
23 the primary ones.

24 BY MR. OLIVER:

25 **Q. And so, it looks like you list three**

83

1 So I think it is a combination of  
2 professional education that I took in house, as  
3 well as some of the things that I presented  
4 outside of the firm.

5 BY MR. OLIVER:

6 **Q. So you performed training programs**  
7 **within FTI?**

8 A. I have, yes.

9 **Q. How often do you do those training**  
10 **programs?**

11 A. At least annually. I'm usually  
12 asked to do some breakout training at our annual  
13 SMD meeting. Like the last one I did was on  
14 international arbitration. So I presented on  
15 that.

16 Sometimes -- I presented once on  
17 ability to pay. So, you know, it is a lot of  
18 aspects of what I work on.

19 And we'll do breakouts and then SMD  
20 level professionals will pick the breakout  
21 training.

22 **Q. Excuse me, what does SMD stand for?**

23 A. Senior managing director.

24 **Q. And about how many senior managing**  
25 **directors are there of FTI?**

85

1 **publications here on page 4.**

2 **Do you see where I'm looking?**

3 A. Yes.

4 **Q. Are there any other publications**  
5 **that you have written?**

6 A. I don't believe so.

7 **Q. The practice note, would you**  
8 **consider that a publication?**

9 A. Where are you looking?

10 **Q. I believe you mentioned earlier that**  
11 **you wrote a practice note for AICPA, M&As**  
12 **dispute task force.**

13 A. Yes, that's not really -- I mean, I  
14 was the primary editor and I wrote certain  
15 sections and edited certain sections.

16 But there's a whole list of like 15  
17 or 20 people that were involved in writing that.  
18 So I'm listing publications that I specifically  
19 wrote alone.

20 I didn't list the practice aid  
21 primarily because it was issued by the AICPA and  
22 I was one of the editors but with about 20 other  
23 people. So a lot of the aspects I didn't write;  
24 I only edited.

25 So that's why it was not listed.

86

1 **Q. Are there other publications that**  
2 **you co-wrote or edited that aren't on this list?**

3 A. No, not that I can recall.

4 **Q. Did you mention that you wrote**  
5 **something for PLI?**

6 MR. KASNER: Object to the form.

7 A. No, those are just presentations  
8 that I did for PLI.

9 BY MR. OLIVER:

10 **Q. Okay.**

11 **And so, the next several pages,**  
12 **almost ten pages it looks like, lists your**  
13 **testimony experience; is that correct?**

14 A. It is the last four years of my  
15 testimony, that's correct.

16 **Q. I'm sorry, can you repeat that?**

17 A. This is the last four years of my  
18 testimony experience.

19 **Q. The first line starts at June 1994.**

20 **Do you see that?**

21 A. Just give me a second. Oh, okay. I  
22 don't think that's the one attached to my  
23 report. It is the one probably on the website.

24 Yes, I see that.

25 **Q. So of all of this list here, how**

88

1 about with the system failure.

2 Let me just get back up to that one.

3 No, Pentatech was the one that was  
4 against On-line Software and Computer  
5 Associates. That dealt with the software that  
6 was written by my clients and then sold and  
7 utilized by On-line Software when they merged  
8 with Computer Associates.

9 It was considered a competition  
10 violation. So I was calculating the damages  
11 relating, relating to that case. So that dealt  
12 with main frame software.

13 **Q. Do you remember what type of damages**  
14 **you were calculating, such as, for example, lost**  
15 **profits?**

16 MR. KASNER: Object to the form.

17 A. I don't really remember. I think, I  
18 think it was lost profits and unpaid royalties,  
19 a combination of the two. I just can't recall  
20 the details.

21 BY MR. OLIVER:

22 **Q. How about the next one you**  
23 **identified, Peckham Materials Corporation.**

24 **Can you explain your role in that**  
25 **case?**

87

1 **many of them are software cases?**

2 MR. KASNER: Object to the form.

3 A. The Pentatech Corporation v. On-line  
4 Software, software case.

5 The Peckham Materials versus Raima  
6 Corporation, that was a software case.

7 The IMS Health versus Validity  
8 Technology was a software case that I talked  
9 about with matching.

10 The Avigilon Technology cases that  
11 are here, I think there's maybe a few of them,  
12 but those are technology cases. Those are  
13 dealing with technology that identifies -- it is  
14 security technology. So it is hardware,  
15 software, code related to identifying, you know,  
16 cars and people and things like that and how the  
17 notifications work. So that's all technology.

18 Those are the ones on my resume that  
19 are related to technology matters.

20 BY MR. OLIVER:

21 **Q. Let's go back to the very first one,**  
22 **Pentatech.**

23 **Can you explain what your role was**  
24 **in those cases?**

25 A. Yes, that's the one that I talked

89

1 A. Yes, that was the one that I talked  
2 about with -- Raima Corporation was hired to  
3 redesign its entire accounting, delivery  
4 systems.

5 It was -- Peckham Materials Corp. I  
6 think sold different types of rock and blacktop  
7 and stuff like that to the New York Department  
8 of Transportation.

9 So they had sophisticated systems  
10 that would actually make the mixes, would record  
11 the billings, would do all the accountings, an  
12 entire system.

13 And so, the dispute was dealing with  
14 Raima Corporation's alleged programming problems  
15 and overcharges and the fact that they crashed  
16 the systems and they had to be worked around.

17 And so, it was basically the systems  
18 and limitation failure. And so, I was doing the  
19 damages work relating to that.

20 **Q. And damages work being the amount of**  
21 **money that your client would want to recover due**  
22 **to these issues?**

23 MR. KASNER: Object to the form.

24 A. Yes.

25

90

1 BY MR. OLIVER:

2 **Q. We talked about IMS Health**  
3 **Incorporated which was the next one you**  
4 **identified. So I don't think we need to talk**  
5 **about that again.**

6 A. Yes.

7 **Q. Alfa Laval, I believe is how you**  
8 **would say that, which occurred, you have dated**  
9 **December 2017.**

10 **Do you see that one?**

11 A. Yes.

12 **Q. I think that's on the third page**  
13 **from the end.**

14 **Can you tell me about your role in**  
15 **that case?**

16 A. What's the caption on that case?

17 **Q. Alfa Laval v. Blue Sage Capital,**  
18 **dated December 2017.**

19 A. Yes, that was a transaction dispute  
20 where I was doing damages work, valuation work  
21 related to a water, water treatment company that  
22 did water treatment work.

23 **Q. And what type of damages were you**  
24 **calculating for your client?**

25 MR. KASNER: Object to the form.

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1 MR. KASNER: Object to the form.

2 A. Probably a 50/50 mix, I would  
3 imagine. I kind of work on both sides of  
4 things.

5 And a lot of times, the defendant  
6 may call me in to do a counterclaim. So it is  
7 kind of like a defendant may be really making a  
8 kind of plaintiff type claim.

9 So there's some of the jobs that  
10 look like they're defendant that they might have  
11 been kind of plaintiff-related work.

12 So, but I would just -- my estimate  
13 would be about 50/50.

14 BY MR. OLIVER:

15 **Q. Okay.**

16 **Did you identify, I may pronounce**  
17 **this wrong, Avigilon Technologies as a software**  
18 **case?**

19 A. Yes, that's the securities software  
20 that I was talking about.

21 **Q. Okay. Yes.**

22 **Are any of these cases related to**  
23 **the Computer Fraud & Abuse Act?**

24 MR. KASNER: Object to the form.

25 A. I don't believe so.

91

1 A. I think I was evaluating the  
2 valuation damages that were being put forth by  
3 the buyer's expert. I was working for a seller.  
4 BY MR. OLIVER:

5 **Q. Okay.**

6 **So you were checking the damage**  
7 **calculations that they provided; is that**  
8 **correct?**

9 MR. KASNER: Object to the  
10 form.

11 A. Yes, I was replying to it. I was  
12 removing certain of the ones that were invalid.  
13 I was adjusting the market multiple because I  
14 did a market analysis.

15 I also -- I did put in an earn-out  
16 calculation. So there was a direct aspect of my  
17 testimony as well of what the earn-out should  
18 have been that wasn't paid to the seller.

19 So I did that calculation for the  
20 court, as well.

21 BY MR. OLIVER:

22 **Q. Can you estimate how often you're --**  
23 **for lack of a better word -- you're doing the**  
24 **initial calculations as compared to the rebuttal**  
25 **of those calculations?**

93

1 BY MR. OLIVER:

2 **Q. Have you done any litigation work**  
3 **related to the Computer Fraud & Abuse Act?**

4 A. Not that I can recall.

5 **Q. Okay.**

6 **So in your list of testimony**  
7 **experience, are any of these related to**  
8 **airlines?**

9 MR. KASNER: Object to the form.

10 A. No. On the global business travel  
11 matter, I didn't end up testifying because it  
12 settled. That was the only one that I remember  
13 being airline-related.

14 We did a little work -- I did a  
15 little work, consulting work for Norwegian Air  
16 when they were having some financial difficulty,  
17 but I don't remember it being that much work.

18 BY MR. OLIVER:

19 **Q. And then so, let's take those one at**  
20 **a time here.**

21 **For Allegiant, what type of work**  
22 **were you doing for them?**

23 MR. KASNER: Object to the form.

24 A. I think I was pitching as part of a  
25 team to look at certain -- I think certain -- it



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1 may have been certain restructuring aspects. I  
2 just don't recall.

3 It was not a significant amount of  
4 work. We just did a little work in the  
5 beginning and I don't recall much of the  
6 details.

7 BY MR. OLIVER:

8 **Q. And I know we talked about it**  
9 **before, but can you explain again what your role**  
10 **in Global Travel was?**

11 A. Yes.

12 I had a client that was going to buy  
13 a percentage of that, of that business. And,  
14 you know, Co-Vid hit and they ended up not  
15 closing.

16 So we were looking at the ordinary  
17 course aspects of the agreement. We were  
18 looking at valuation changes in the business.  
19 We were looking at, you know, at what point cash  
20 flow -- at what point the business would run out  
21 of cash flow as an entity, re-funded, you know,  
22 would have to borrow more money.

23 You know, was it going to be solvent  
24 after a certain period of time. So it was like  
25 solvency valuation, cash flows. Those kinds of

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1 **attorneys and corporations in litigation,**  
2 **arbitration and mediation matters."**

3 **Do you see that section?**

4 A. Yes.

5 **Q. Do you do any type of work currently**  
6 **outside of litigation?**

7 MR. KASNER: Object to the form.

8 A. I would say the only aspects that  
9 are nonlitigation but they're kind of  
10 claim-related is I do a lot of rep and warranty  
11 claims work.

12 So I'll review a claim presented.  
13 It is not a litigation because I'm reviewing the  
14 insurance company's client's presentation of a  
15 claim and making a determination as to whether  
16 it should be paid or not.

17 So it is not really a dispute. It  
18 is really a valuation of a claim. So that's not  
19 really arbitration or litigation. It is really  
20 claims work.

21 BY MR. OLIVER:

22 **Q. So you would consider your expertise**  
23 **also in claims work with regards to reps and**  
24 **warranty, as you described it?**

25 A. Yes.

95

1 things that we analyzed.

2 And we started to draft four  
3 different expert reports, and it ended up  
4 settling.

5 **Q. Okay. Thank you.**

6 MR. OLIVER: I'm going to pull up  
7 another exhibit for us. This will be  
8 Exhibit 421.

9 (Expert Rebuttal Report and  
10 Disclosure of Basil Imburgia was  
11 marked as Exhibit 421 for  
12 identification, as of this date.)

13 THE WITNESS: Okay.

14 BY MR. OLIVER:

15 **Q. And can you state for the record**  
16 **what document we're looking at?**

17 A. This is my expert rebuttal report  
18 issued on September 29, 2003. 2023. Excuse me.

19 **Q. We talked a fair bit about your**  
20 **professional background, but maybe we can start**  
21 **with this section here on page 1.**

22 A. Okay.

23 **Q. You have a sentence that "My**  
24 **expertise includes providing financial,**  
25 **accounting, valuation and economic analysis to**

97

1 I mean, currently -- I mean,  
2 historically I was a financial statement  
3 auditor. I did performance improvement work. I  
4 did valuation in nonlitigation cases previously.

5 Over the years, I've done probably  
6 much more higher percent of nonlitigation work.

7 But I would say now -- besides the  
8 North American leadership work, which is not  
9 client work, but that's probably about 30  
10 percent of my work that's nonlitigation-related.  
11 But that's more leadership work.

12 The rest of it is, you know, is very  
13 mediation, arbitration and litigation focused.

14 **Q. In our discussion of your**  
15 **background, I don't know if we talked about**  
16 **ERISA, Employment Retirement Income Security**  
17 **Act.**

18 A. Sure.

19 **Q. Can you tell me a little bit about**  
20 **what you do in that space?**

21 A. You know, I've done, you know, a  
22 number of accounting-related claims that are  
23 being put forth by different pension funds  
24 relating to, you know, failure to account for  
25 things properly.

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MR. KASNER: Object to the form.

A. I mean, general damage analysis, if you're talking about general damage analysis or valuation analysis or accounting analysis, you're not -- like accounting, you're applying Generally Accepted Accounting Principles. So your calculations and application are following those principles.

In valuation, you're following the typical valuation approaches like the cost, the market approach, the discounted cash. You're following the same approaches.

It is the same in damage analysis. In damage analysis, you're following the same approach. You're trying to do the but-for analysis. You're trying to look at causal links and things like that or are there other causes.

So the methodology is not different in any of those kinds of areas. You just, you just need to understand the facts and circumstances of the situations that you are applying those commonly applied kind of calculation rules and facts to, in essence.

BY MR. OLIVER:

**Q. We talked about GAAP for accounting**

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rules like the accounting standards. They're, you know, discussions in textbooks and things like that of things you should be following and ways that a damage expert should be thinking to make things -- to make sure it is logical.

There's causal links to things that makes fair that there's no windfalls and things like that.

So that practice is typically, is typically followed, but it is not -- they're not rules that, you know, that are put out.

Now, I mean, there's case law that's relating to damage analysis that could be construed as some kind of rules, as well. But as a damages expert, I think you're mostly -- you're understanding how, how your industry does calculations when you come to a damage type situation.

THE WITNESS: I just want a bathroom break and grab some water. Maybe five minutes?

MR. OLIVER: That works for me. Five minutes, yes.

THE VIDEOGRAPHER: We are going off the record. The time is 11:53 a.m.

103

**as the standard.**

**Is there a standard for general damage analysis?**

MR. KASNER: Object to the form.

A. The generally accepted accounting literature is literature that companies need to follow and accountants need to follow.

It is, it is, it is authoritative literature that needs to be followed. When it comes to damage analysis or even valuation, for the most part, there's books, textbooks written, publications written on valuation methodologies, on damages methodologies that are put out by the industry of different type -- you know, the damages experts or the valuation experts.

So you're typically following those general rules as a damage or valuation expert, but it is not like the accounting literature.

The accounting literature is adopted by the SEC. The accounting literature comes out from bodies. And as a CPA, these are the kind of rules that you actually follow when you're doing -- putting together financial statements.

I think when it comes to valuation and damages, there really aren't like a set of

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(Whereupon, at 11:53 o'clock a.m., a recess was taken until 12:40 o'clock)

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## AFTERNOON SESSION

12:40 o'clock p.m.

THE VIDEOGRAPHER: We are back on the record. The time is 12:40 p.m.

BY MR. OLIVER:

**Q. So before the break, we were talking about general industry rules and standards. Basically about general accounting damage analysis, accounting and then valuation.**

**I would like to move over to paragraph 6 in your report, which is Exhibit 421.**

A. Okay.

**Q. My first question to you is, were you working with team members on this report?**

A. Yes.

**Q. What was the billing rate of your team members?**

A. Probably somewhere in the range of 500 to \$900 an hour, roughly.

**Q. How many team members were you working with?**

A. I think principally two team members were kind of the core team.

**Q. And were there other team members**

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**supporting you outside of this core team?**

A. We usually have a separate group doing like QC work. So there's probably one or two people that did QC work.

**Q. What do you mean by QC work?**

A. Like, they'll take the report and they'll tie to the support. Even though we've done that already when we're drafting the report, we'll just have one or two separate people kind of redo those steps, add up the numbers on the schedules and just making sure, you know, the report is correct.

**Q. And so, the core team members that you were referring to, these two people, what were their roles in this report?**

A. Dana Hayes is a managing director. Her primary responsibility is being charged with the project, draft sections of the expert report and help me supervise the team.

The team really is Carly Rowen. She was a director that worked on this matter, as well. She would have done some of the calculations in schedules or calculations that were referred to in notes to the report.

**Q. What sections did Dana Hayes write?**

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A. What I typically do and did in this matter is I will typically sit down and I'll outline the report draft.

Like things like my background and things like that are already written from other reports. So I will provide that to Dana and the team.

I'll outline the report, you know, after reviewing the pleadings and the opposing expert's report, I'll outline it for her. I'll provide her that outline.

And then Dana and Carly will write the sections of the report. They take the first shot at writing and then provide it to me, and then I provide edits to them, rewrites to them.

That's how I typically work.

**Q. Can you estimate how much time you and your team spent on this report?**

A. I'm not the billing person, so I don't have it. I would imagine maybe 120 hours, maybe 140 hours, roughly.

**Q. And about how much of that was your core team as compared to you?**

A. I probably had about 20 or 25 hours, roughly, I would guess.

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**Q. And so, the balance would be your core team?**

A. Yes.

**Q. Jumping back up to paragraph 5, you mention you've been deposed and testified as an expert in several -- you know, in many different cases here.**

**Have any of your expert reports been disqualified?**

A. No, they haven't been disqualified. I've had -- I had one case where I was doing a covenant compliance review in a bench trial.

And when I said out of compliance, the judge said "Your direct testimony should cross that out because I'll make the decision about out of compliance. With the covenants you can just present me with the numbers in the loan agreements and you can do the calculations and present me. I want out of compliance out of your direct testimony." Making the conclusion that that's a legal conclusion.

So that was one where just the out of compliance was taken out of my report, but the direct testimony went in. The rest of it went in in writing.

110

1 I just recently was doing a case  
2 where I'm doing the damages work and I'm relying  
3 on a branding and I'll call it a communications  
4 expert to do all of my damage calculations.

5 But instead of just relying on that  
6 expert, I wanted to kind of redo all the work  
7 that she did myself and put that in my report.

8 And I did, I did the branding tests.  
9 I looked at the communications. I listened to  
10 all the customer communications with the, with  
11 the service providers that were at issue in this  
12 matter.

13 In that case, the judge said "You  
14 can rely on that branding and communications  
15 expert. It is fine. You can do all your  
16 calculations, but, you know, since you're an  
17 accountant, I don't want you dealing with the  
18 branding communications. I don't want a redo of  
19 what she did."

20 So all the numbers went in, and that  
21 stuff I'm not going to be able to testify to. I  
22 believe that's, that's it that I can think of.

23 **Q. So now referring to paragraph 7 of**  
24 **your report, do you see which paragraph I'm**  
25 **looking at?**

112

1 referring to?

2 A. Yes.

3 **Q. So when you say evaluate Ryanair's**  
4 **estimate of damages, what are you referring to**  
5 **by that?**

6 A. I'm referring to Mr. Lopata's report  
7 and what he's presenting in his report.

8 **Q. And then, the next sentence there**  
9 **refers to the Computer Fraud & Abuse Act.**

10 **Do you see that?**

11 A. Yes.

12 **Q. Did you review the Computer Fraud &**  
13 **Abuse Act?**

14 MR. KASNER: Object to the form.

15 A. Yes, yes.

16 BY MR. OLIVER:

17 **Q. Is it all right if I refer to that**  
18 **Computer Fraud & Abuse Act as the CFAA?**

19 A. Yes, that's fine.

20 **Q. In the next paragraph, you note**  
21 **that -- and I'm reading from your paragraph 9.**

22 **It says "I note that**  
23 **Mr. Lopata states that he's not a damage expert.**  
24 **However, his report concerns the calculation of**  
25 **damages, which he acknowledges."**

111

1 A. Yes.

2 **Q. The sentence reads "This matter**  
3 **relates to claims brought by Ryanair DAC against**  
4 **Booking Holdings Inc." and then the rest of the**  
5 **defendants here.**

6 **Is your report related to the**  
7 **defendants' counterclaims?**

8 MR. KASNER: Object to the form.

9 A. Yes, at this point I haven't been  
10 asked to do anything relating to any  
11 counterclaims.

12 BY MR. OLIVER:

13 **Q. Are you aware of the counterclaims**  
14 **from the defendants?**

15 MR. KASNER: Object to the form.

16 A. I mean, I heard the word  
17 counterclaim mentioned by the attorneys, but I  
18 haven't reviewed any counterclaims or I haven't  
19 reviewed anything relating to them.

20 BY MR. OLIVER:

21 **Q. Okay.**

22 **Looking at paragraph 8 here, it says**  
23 **"FTI has been retained by Cooley LLP (Counsel)**  
24 **to evaluate Ryanair's estimate of damages."**

25 **Do you see the sentence I'm**

113

1 **Do you see which sentence I'm**  
2 **referring to?**

3 A. Yes.

4 **Q. Why does it matter that Mr. Lopata**  
5 **stated that he's not a damages expert?**

6 MR. KASNER: Object to the form.

7 A. It matters because he may not be  
8 familiar with how to do a complete damage  
9 calculation. That's why I referred to that.

10 BY MR. OLIVER:

11 **Q. Okay.**

12 **So that's relevant for the reasons**  
13 **you stated before?**

14 MR. KASNER: Object to the form.

15 A. Well, it is relevant because since  
16 he doesn't do damage analysis, he may not  
17 understand what kind of support you would  
18 normally look for as a damages expert.

19 You would not understand causation  
20 issues. You would not understand offsetting  
21 profits and things like that.

22 So, he may not understand what is  
23 typically done in doing damage analysis and what  
24 is typically considered.  
25



122

1 the high-level summary opinions in my report.  
2 BY MR. OLIVER:  
3 Q. Okay.  
4

[REDACTED]

123

[REDACTED]

124

1 BY MR. OLIVER:  
2

[REDACTED]

25 because it is based on the underlying

125

[REDACTED]

126

[REDACTED]

17 Q. What do you mean by the actual costs  
18 related to the claimed violation?

19 A. Well, the actual costs related to  
20 the claimed violations are going to be, you  
21 know, the actual costs of -- making it simple,  
22 it is going to be the actual costs in the  
23 payroll records for certain individuals and it  
24 is going to be the actual costs that are  
25 reflected in the invoices that were sent to the

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1 company and paid by the company.

2 So it is twofold. The actual costs  
3 are not confirmed by relying on just the  
4 interrogatories.

5 And so, you know, if you went and  
6 got the correct documentation, then that would  
7 support the actual costs.

8 Now, there's issues with estimates  
9 as well, which is a different issue. But, you  
10 know, when we're talking about support, those  
11 are the elements of support that he didn't, he  
12 didn't, he didn't trace and agree his  
13 calculations to.

[REDACTED]

128

1 [REDACTED]

129

[REDACTED]

130

[REDACTED]

131

1

MR. KASNER: Object to the form.

[REDACTED]

15

BY MR. OLIVER:

16

**Q. And can you explain what a slowdown is?**

17

18

A. I think in the pleadings, I saw reference to, you know, significant activity on Ryanair computer systems and claims and alleged claims that they, you know, as the activity increased, the system slowed down.

19

20

21

22

23

24

25

So that's what I'm referring to.

**Q. And then, what about a shutdown, what is that?**

132

1 A. I think if the activity was so  
2 significant, I think there's like a day they  
3 referred to when the system went down.  
4 I think that's -- I think that's  
5 what Mr. Lopata was referring to in his report  
6 because this is kind of a reply to his report.  
7 So I think that's what he's referencing.  
8 **Q. Do you know what a brownout is?**  
9 MR. KASNER: Object to the form.  
10 A. Excuse me, can you repeat that?  
11 BY MR. OLIVER:  
12 **Q. A brownout, do you know what that**  
13 **means?**  
14 MR. KASNER: Object to the form.  
15 A. I mean, only in the context of --  
16 you know something, I wouldn't want to  
17 speculate. I'm not sure that I know.  
18 BY MR. OLIVER:  
19 **Q. Do you know what a blackout is?**  
20 MR. KASNER: Object to the form.  
21 A. I mean, in the context of utilities  
22 and things like that, I would think it is, you  
23 know, exactly what it sounds like. Your  
24 electricity goes off and you're blacked out.  
25

133

1

BY MR. OLIVER:

2

**Q. Do you know what it means in the context of computer science?**

3

4

MR. KASNER: Object to the form.

5

A. I don't really recall. I might have read it in a deposition that I read, but I don't recall.

6

7

8

BY MR. OLIVER:

9

**O. So moving to the next bullet point**

[REDACTED]

134

135

20  
21  
22  
23  
24  
25

**Q. You used this term a few times. I don't know if we have gotten to a proper definition.**

**Can you explain the term but-for?**

A. Sure.

Typical damage analysis. So let's

136

137

1 just put a hypothetical up there. So if I have  
2 a contract where somebody was supposed to supply  
3 me a thousand products and they didn't comply  
4 with the contract and they only gave me 500 of  
5 those products, right, a but-for world analysis  
6 is had they actually complied with the contract,  
7 did the right things, didn't violate and breach  
8 a contract, the supplier would have given me a  
9 thousand.

10 And then you have to say, okay, what  
11 kind of profits would I have made on that  
12 additional 500.

13 So the but-for world is basically  
14 taking the acts of the defendants and saying,  
15 okay, how would the profit and loss of a  
16 business change but for these acts.

17 So you correct for it, and then you  
18 try to calculate what the effect is.

19 So that's the but-for world.

20 **Q. And does that come from your general  
21 damage analysis?**

22 MR. KASNER: Object to the form.

23 BY MR. OLIVER:

24 **Q. Sorry, let me rephrase that.**

25 **Is the but-for world the source of**

1 **that theory from general industry practice for  
2 damage calculations?**

3 A. Yes, that's general practice.

4 That's where I referred to a number of textbooks  
5 that talk about it, as well as my, you know, 35  
6 years of doing this kind of work, my knowledge  
7 of how you do these calculations.

8 **Q. Okay.**

9 **So moving to the next paragraph,  
10 paragraph 13 in the summary of factual  
11 background. This very first sentence, it reads  
12 "Ryanair is Europe's largest airline group and  
13 parent company of Ryanair, Ryanair UK, Buzz,  
14 Lauda and Malta Air."**

15 **Do you see that sentence?**

16 A. Yes.

17 **Q. Can you clarify that for me?**

18 **Is Ryanair the parent company of  
19 Ryanair?**

20 MR. KASNER: Object to the form.

21 A. You know, this is a quote we got off  
22 of Ryanair website.

23 So Ryanair is Europe's largest  
24 airline group and parent company of Ryan, Ryan  
25 UK. I mean, I'm quoting.

138

1 I'm trying to give some background  
2 of the company, so I usually go to their own  
3 descriptions.

4 And so, I don't think I know the  
5 answer because -- like I don't think these  
6 are -- I think in this language, they're not the  
7 official corporate names. They're kind of more  
8 user friendly names. So they're cutting out  
9 some of the LLPs and the inc.s and things like  
10 that.

11 So I think they're just trying to  
12 make it more customer friendly. So I can't  
13 answer it based on this without probably looking  
14 at -- I could look at the 10K and tell you.

15 BY MR. OLIVER:

16 **Q. Do you know who the party of this**  
17 **litigation is?**

18 A. So the plaintiff is Ryanair DAC.

19 **Q. And do you know if that's the**  
20 **airline group and parent company as it says in**  
21 **that quote?**

22 A. I would assume it is because Ryan  
23 was probably named in the beginning of this  
24 report as the, as the plaintiff.

25 So Ryanair in paragraph 7 is Ryanair

140

1 choice if they're -- if they're majority owned,  
2 you have to consolidate them in these, in these  
3 financial statements.

4 **Q. Okay.**

5 **Why did you include this**  
6 **information?**

7 A. For background purposes. You're  
8 always going -- I mean, we're dealing with costs  
9 that are being put forward in Mr. Lopata's  
10 report.

11 So if you're putting costs forward,  
12 you want to understand what the entire income  
13 statements look like for the company at issue.

14 So, what we did is we took like some  
15 of their selected financial data that deals with  
16 flight activity and passenger load factors and  
17 profitability revenues, as well as the actual  
18 income statement for the entity that lays out  
19 the actual revenues, profits, taxes, things like  
20 that.

21 But it is background. It is for  
22 background purposes.

23 **Q. Okay.**

24 **Looking at paragraph 14 --**

25 A. Okay.

139

1 DAC Ryanair. So -- and the way this is -- if  
2 we're putting in Ryan, then this information --  
3 if this is the parent company, I would imagine  
4 based on the way this is written Ryanair is the  
5 parent company to these other companies.

6 **Q. Also, in the next sentence it says**  
7 **"The tables below contain summaries of Ryanair**  
8 **operational and financial data."**

9 **Do you see that?**

10 A. Yes.

11 **Q. So this is financial data in your**  
12 **understanding of Ryanair DAC?**

13 A. Well, it is going to be -- if you  
14 look in note 9, it is Ryanair Group.

15 So I assume it is the parent company  
16 and all of its subsidiaries consolidated.

17 **Q. Okay.**

18 **So you would believe that this**  
19 **information includes Ryanair UK, Buzz, Lauda and**  
20 **Malta Air?**

21 A. I mean again, I would have to look  
22 at the note 1 to the financial statements to see  
23 what's consolidated out.

24 But I would assume the Ryanair Group  
25 is all their entities because you don't have a

141

1 **Q. -- it looks like you have some**  
2 **quotes about each of the different defendants**  
3 **such as, you know, Booking.com is an online**  
4 **travel company founded in Amsterdam and is,**  
5 **quote, one of the world's largest leading**  
6 **digital travel companies, end quote.**

7 **Do you see that?**

8 A. Yes.

9 **Q. For Priceline, a couple sentences**  
10 **down, you write that "Priceline, an OTA, was**  
11 **founded in 1997 to address unmet travel demands**  
12 **through the internet."**

13 **What travel demands was Priceline**  
14 **trying to meet?**

15 MR. KASNER: Object to the form.

16 A. You know, without looking at the  
17 website, I don't think I recall. Because this  
18 is coming from their own website information.  
19 So, I just don't remember without looking at  
20 more details.

21 And they may not even say it in  
22 there. That may just be, you know -- it is just  
23 background on why the company was formed. So  
24 I'm not sure it would even be in the details.

25

142

1 BY MR. OLIVER:

2 Q. Okay.

3 So you're not sure if that is a  
4 quote or if that's your own language?

5 A. I mean, we -- it may be  
6 paraphrasing. It is possible, but it would have  
7 been basically paraphrasing what we saw on the  
8 website.

9 Q. Okay.

10

143

12 So it is fair to say that these are,  
13 you know, standard damage practice best  
14 practices?

15 MR. KASNER: Object to the form.

16 A. Yes, these are things that damage  
17 experts are going to consider in their analysis;  
18 fixed variable expenses, verifying costs. You  
19 know, what the but-for world would be, you know,  
20 with offsetting revenues and mitigation.

21 BY MR. OLIVER:

144

10 Q. Okay.

11 And so this, as you were saying, is  
12 a standard practice and, you know, you cite to  
13 the Reference Guide on Estimation of Economic  
14 Damages?

15 MR. KASNER: Object to the form.

16 A. Yes.

17 BY MR. OLIVER:

18 Q. Is that a well-regarded source in  
19 your industry?

20 A. Yes.

21 These textbooks that I'm referring  
22 to, I typically do refer to and utilize.  
23 They're in my office. And others in my firm and  
24 practice also utilize the similar, same  
25 textbooks.

145

1 Q. And so, when you're looking at  
2 resources like this, it is pretty standard  
3 across claims and across industry; is that  
4 correct?

5 MR. KASNER: Object to the form.

6 A. Yes, I would say, you know, these  
7 kinds of things are things that damages experts  
8 are typically considering and evaluating and  
9 building into their calculations.

10 BY MR. OLIVER:

11

146

[REDACTED]

147

[REDACTED]

148

[REDACTED]

149

[REDACTED]

<div>150</div> <div>25</div> <div>[REDACTED]</div>	<div>151</div> <div>1</div> <div>BY MR. OLIVER:</div> <div>[REDACTED]</div>
<div>152</div> <div>[REDACTED]</div>	<div>153</div> <div>[REDACTED]</div>



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1 So you can read No. 11 there. "As  
2 used in this section, the term loss means any  
3 responsibility," and then it goes on for the  
4 rest of the definition.

5 A. Yes.

6 MR. KASNER: Object to the form.

7 A. I see that. Okay.

8 BY MR. OLIVER:

9 Q. Okay.

10 So looking back at 11 here for the  
11 term loss, and it means -- do you understand  
12 what any reasonable cost to any victim means?

13 MR. KASNER: Object to the form.

14 A. I mean, my view is looking at that  
15 as a damages person is, you know, if you have  
16 some kind of computer fraud event that, you  
17 know, it is describing loss as being, you know,  
18 any cost to the victim.

19 I mean, cost I assume is going to be  
20 some kind of expense, spending, that kind of  
21 thing.

22 BY MR. OLIVER:

23 Q. And it goes on to provide examples,  
24 and it says including the cost of responding to  
25 an offense.

164

1 authorization.

2 A. Yes.

3 Q. What do you mean by the term loss  
4 there?

5 MR. KASNER: Object to the form.

6 A. Yes, I think the term loss, as  
7 they're using it, probably is -- it seems like  
8 it is everything. It is costs, it is  
9 consequential damages. It is investigative  
10 costs. It seems like it is the whole gamut.

11 I think damage, as they're using it,  
12 seems to be relating to damage to your computer  
13 system. It seems to be more limited. Loss  
14 seems to be a bigger category, in essence.

15 BY MR. OLIVER:

16 Q. Okay.

17 So let's take one more jump back to  
18 Exhibit 421 which is your report.

19 A. Yes.

20 Q. So I would like you to take a look  
21 at paragraph 17.

22 A. Okay.

23 Q. What do you mean by the industry  
24 standard principles of calculating economic loss  
25 and damages?

163

1 Do you see that?

2 A. Yes.

3 Q. And then it says conducting a damage  
4 assessment.

5 Do you see that?

6 A. Yes.

7 Q. And then it says and restoring the  
8 data program system or information to its  
9 condition prior to the offense.

10 Do you see that?

11 A. Yes.

12 Q. Any revenue lost.

13 Do you see that?

14 A. Yes, I see that.

15 Q. And then it goes on to say cost  
16 incurred or other consequential damages incurred  
17 because of the interruption of service.

18 Do you see that?

19 A. Yes, I see that.

20 Q. So I would like to jump back to  
21 Exhibit 422.

22 A. Okay.

23 Q. And then back to 5(c) in that far  
24 right column where it leads with intentionally  
25 accesses a protected computer without

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1 MR. KASNER: Object to form.

2 A. It is basically, as a damages  
3 expert, it is basically the principles I talked  
4 about previously; mitigation, the but-for world,  
5 understanding fixed and variable expenses,  
6 understanding, you know, what costs and what  
7 revenues would be eliminated but for the  
8 defendants' actions.

9 It is general damage analysis.

10 BY MR. OLIVER:

11 Q. So when you use the term loss and  
12 damages here, are you referring to those  
13 definitions we saw in the Computer Fraud & Abuse  
14 Act?

15 MR. KASNER: Object to the form.

16 A. I would say that I'm referring to  
17 general damages and loss as a damages expert  
18 would do its calculations which, if you look at  
19 paragraph 16, which is from the CFAA, I think it  
20 is looking at all those components, the  
21 consequential damages, the cost elements, is  
22 there any data program problems, cost  
23 investigation.

24 I think it relates to the issue here  
25 is coming into a system using that data to sell

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customer business. So it is basically related to the situation and the claims of the case.

So I'm referring to it from a general damage theory, and I use loss and damages synonymously because, you know, when it comes into investigating the damage to your computer system, right, I would think about that as, you know, I lost data, I lost code and I have to spend costs to get that data and code back up.

They define that as a damage. You could define that as a loss, too, reading this because, you know, it talks about conducting damage analysis when it is referring to the term loss.

So I still think they're very synonymous because all of those things are, in my view, expenditures that you need to incur.

And, you know, as I said, we use damage and loss usually synonymously. We don't define them as different things because they are very similar.

BY MR. OLIVER:

**Q. Are you aware of any industry standard principles for calculating loss as**

168

A. Yes, correct.

**Q. And then it goes on to have a quote from the Reference Guide on Estimation of Economic Damages?**

A. Yes.

**Q. Does the Reference Guide on Estimation of Economic Damages discuss the CFAA?**

MR. KASNER: Object to the form.

A. The text that I'm referring to are written by financial and economic and accounting people.

I don't think they're going to go in and reference, you know, different types of laws and rules. They may. I have to look at the entire text.

But I would think they're basically talking about damage analysis from the perspective of what damage professionals do in the industry.

But, you know, I would have to look at the entire text to see if they're referring to the CFAA in any way. I just don't recall.

BY MR. OLIVER:

**Q. So the first part of that sentence, you know, that we were just talking about says,**

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**defined by the CFAA?**

MR. KASNER: Object to the form.

A. Yes, it would be my opinion that you have to apply general damage theory, and I don't see the loss reference as being any different than general damage theory.

So, you know, you have this statute, the CFAA. It is talking about costs. It is talking about lost profits and those kinds of damages and interruption of services.

It is the same kind of damage analysis you would do in any type of case. You are going to look at costs. You're going to look at revenues. You're going to look at lost profits, consequential damages which are typically referred to in most contracts. The same kind of thing in my opinion.

BY MR. OLIVER:

**Q. So let's go back to paragraph 18.**

A. Okay.

**Q. Do you see the sentence that starts with damages should be limited to those which would not have arisen absent the defendant's conduct?**

**Do you see that?**

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**damages should be limited to those which would not have arisen absent the defendant's conduct.**

**Do you see that?**

A. Yes.

**Q. And then, looking at the term loss as defined in the CFAA, which you can also see in paragraph 16 so we don't have to go back to those other exhibits, conducting a damages estimate.**

**Do you see that?**

A. Yes.

**Q. Wouldn't that be a, you know, a cost associated from the defendants' conduct?**

MR. KASNER: Object to the form.

A. Yes, I mean, that's a situation if the defendants have done something and, in relation to what they have done, you have to do a damage assessment.

So you have to investigate the effects of what the defendants have done. That is something that is tied to the defendants' actions.

So if I'm doing it in relation to the defendants' actions, and but for those defendants' actions that cost wouldn't be

170

1 incurred, then it is related. It is kind of an  
2 incremental cost.

3 BY MR. OLIVER:

4 **Q. So moving over to paragraph 19**  
5 **again. The first sentence reads damages must be**  
6 **proven to a reasonable degree of certainty.**

7 **Do you see that?**

8 A. Yes.

9 **Q. Are you referring to damages as**  
10 **defined by the CFAA or damages as used in your**  
11 **general damage industry standard?**

12 MR. KASNER: Object to the form.

13 A. Let's put it this way, I use damages  
14 and loss synonymously.

15 So I would refer to both damages and  
16 losses, anything you're claiming.

17 Because normally, you know, in a  
18 litigation you don't say I have a loss expert.  
19 You normally say I have a damage expert that's  
20 putting all of the what you want to call losses  
21 and damages together and making a damages claim.

22 So when I refer to damages, I'm  
23 referring to the whole gamut.

24 BY MR. OLIVER:

25 **Q. And then you provide a quote from**

171

1 **the AICPA in the next sentence.**

2 **Do you see that?**

3 A. Yes.

4 **Q. Does the AICPA discuss calculating**  
5 **loss under the CFAA?**

6 MR. KASNER: Object to the form.

7 A. Yes, I'd have to look at the text to  
8 see if they talk about it or not.

9 I think again it is more general  
10 damage calculations that you are doing in all  
11 different types of contexts, including the CFAA,  
12 I would imagine, because paragraph 16 sounds  
13 just like the way you do a general damage  
14 calculation in many different cases.

15 But, again, I don't know if they  
16 refer to it or not without looking at the text.

17 BY MR. OLIVER:

18 **Q. Okay.**

19 **But you're not aware as of right**  
20 **now?**

21 A. Yes, I don't recall one way or the  
22 other at this point.

23 **Q. Okay.**

24 **Looking back at paragraph 20,**  
25 **failure to consider offsetting revenues.**

172

1 **Do you see that?**

2 A. Yes.

3 **Q. Does the CFAA require offsetting**  
4 **revenue?**

5 MR. KASNER: Object to the form.

6 A. I would believe so based on the fact  
7 that when it is defining the term loss, it is  
8 talking about components, costs, respond to an  
9 offense, conducting damage assessment, restoring  
10 the data programs and systems to the condition  
11 they were prior to the offense and then any  
12 revenue loss, costs incurred and other  
13 consequential damages incurred because of the  
14 interruption.

15 You know, my view is looking at  
16 that, it is looking at all elements of damage  
17 analysis. It is looking at consequential too.  
18 Do I have lost profits, as well.

19 So, you know, components of loss  
20 would include lost profits. It is just here we  
21 have a unique situation where the OTA's business  
22 is bringing profits to Ryanair. So a  
23 consequence of the OTAs, based on paragraph 16,  
24 would be profits.

25 So my view is that that's part of

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1 typical damage analysis. You're doing typically  
2 a lost profits claim.

3 But here the consequence is an  
4 actual profit, not loss. So it's got to be  
5 considered based on this paragraph and general  
6 damage theory.

7 BY MR. OLIVER:

8 **Q. Does the definition of loss use the**  
9 **term profit?**

10 MR. KASNER: Object to the form.

11 A. It is using consequential damage  
12 which you're thinking is a harm.

13 But if it is not a harm, you know,  
14 in your but in your but-for world analysis,  
15 you're going to try to figure out what it is.

16 And if it is profits, you know, if  
17 you're going to put forward a reasonable damage  
18 calculation, you have to consider all the  
19 effects of the but-for world of eliminating  
20 defendants. And this would be one of those  
21 effects.

22 BY MR. OLIVER:

23 **Q. And does your answer change even**  
24 **though it says "or other consequential damages**  
25 **incurred because of the interruption of**

174

1 service"?

2 MR. KASNER: Object to the form.

3 A. No, it doesn't change my view. You  
4 have to look at -- I think most of this -- it is  
5 a unique situation. All right.

6 If you think about it, you think  
7 about loss and harm. You don't think about  
8 somebody taking data off your system, selling  
9 business in essence to customers that come back  
10 and buy Ryanair flights and you make a profit.

11 It is almost like the activities of  
12 the OTAs are profitable.

13 I don't think that the CFAA was  
14 thinking that computer fraud and abuse would  
15 lead to profits. I just don't think it was  
16 designed that way.

17 But it does talk about consequential  
18 damages which are the consequence of the actions  
19 which are the consequence of these actions, and  
20 eliminating those actions in damage analysis  
21 would eliminate a profit for Ryanair.

22 And that has to be considered in  
23 damage work.

24 BY MR. OLIVER:

25 **Q. And so, can you explain the**

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1 deciding to do something that cost them more.  
2 If they mitigated, they would maybe change a  
3 procedure and it may cost them less kind of  
4 thing.

5 I think they're two separate things.

6 **Q. Does the definition of loss under**  
7 **the CFAA include the cost of responding to an**  
8 **offense?**

9 MR. KASNER: Object to the form.

10 A. Yes, I mean it says any reasonable  
11 cost to any victim, including the cost of  
12 responding to an offense.

13 BY MR. OLIVER:

14 **Q. And do you understand what the word**  
15 **offense means in the context of the CFAA?**

16 MR. KASNER: Object to the form.

17 A. I would say it is some computer  
18 fraud alleged offense. I would think that  
19 that's what they're referring to.

20 BY MR. OLIVER:

21 **Q. And so, responding to an offense, is**  
22 **that different than the duty to mitigate?**

23 MR. KASNER: Object to the form.

24 A. I would think that's something  
25 different than duty to mitigate.

175

1 **difference between offsetting revenues and**  
2 **considering mitigation?**

3 A. Offsetting revenues are  
4 consequential damages are one of the effects of  
5 taking the OTAs out of, you know, the OTA  
6 defendants out of the Ryanair activity.

7 So offsetting revenues is what  
8 profit if those OTAs that are the defendants  
9 weren't selling bookings, what profits would be  
10 eliminated.

11 So, that's separate. I think  
12 mitigating -- I don't think mitigation is  
13 relating to Ryanair specifically.

14 I don't think Ryanair -- I don't  
15 think the offsetting revenues is mitigation. I  
16 think the offsetting revenues is just -- it is  
17 something Ryanair isn't, isn't doing relating to  
18 a damage. It is just the effects of removing  
19 the defendants from Ryanair activity.

20 Mitigation is basically -- and I  
21 talked about it. You know, the streamlining is  
22 are there things that Ryanair are doing that  
23 they're doing specifically that are costing  
24 more.

25 And mitigation would be if they're

177

1 Responding to events to me seems  
2 like I have a hacking issue and I'm going to  
3 respond to that issue.

4 So, I don't -- mitigation is  
5 something different.

6 BY MR. OLIVER:

7 **Q. And so, something like streamlining**  
8 **certain processes -- let me start that over.**

9 **So streamlining certain processes**  
10 **would make it easier for OTAs; is that correct?**

11 MR. KASNER: Object to the form.

12 A. I think the streamlining I'm talking  
13 about is -- I think we specifically referred to  
14 in my report as them, Ryanair, making it more  
15 difficult for certain verifications and things  
16 like that for certain OTA customers.

17 And I refer to that as my example of  
18 duty to mitigate. I say that, you know, that's  
19 under their control. They can make, they can  
20 make it easier for the customer. If they make  
21 it easier for the customer, it may cost them  
22 less.

23 So that's the duty to mitigate. I  
24 don't think it is talking about making it easier  
25 for OTAs to scrape or do any of that kind of

178

1 stuff. That wasn't what I was referring to. I  
2 was referring to a specific example.

3 BY MR. OLIVER:

4 Q. Okay.

5 So let's take a look at  
6 paragraph 24.

7 A. Okay.

179

180

1

BY MR. OLIVER:

181



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BY MR. OLIVER:

**Q. So you believe those types of calculations are required under the CFAA when determining loss?**

A. Yes.

**Q. Are those minimum calculations required when determining the \$5,000 threshold under the CFAA for bringing a claim?**

MR. KASNER: Object to the form.

A. I would imagine they are. I mean, if you're trying to look at a statute and the statute says you should refer to a certain level of costs, I would think that you, you know, you shouldn't be not tying into the actual information.

I mean, if you're comparing a number, you want to make sure you're doing loss and damage analysis to a reasonable degree of certainty.

So when you do that, you can always

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types of damages that you would calculate; consequential costs, direct damages, indirect damages, those kinds of things.

The \$5,000, if you're comparing those losses, those types of losses to a \$5,000 number, you know, those types of losses are going to have to be, you know, done to a reasonable degree of certainty.

I mean, it starts with any reasonable costs. So it is putting the words reasonable in there, as well.

So my view is the 5,000 is just a number. You're supposed to follow their kind of definitions, which to me, sound just like, you know, typical economic damage work.

**Q. You used the -- referenced the word "reasonable".**

**Who determines reasonability under the definition of loss?**

MR. KASNER: Object to form.

A. Well, reasonable degree of certainty. Reasonable nature. I mean, as a damage expert, I'm evaluating the reasonable nature of things because when I'm putting any kind of loss damage analysis together, they have

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compare, as the statute says, to a \$5,000 number. That's fine.

But you can't have speculative numbers that are being compared to a \$5,000 number. They're looking for, you know, real valid loss numbers that are substantiated when you do that comparison.

**Q. And what do you --**

MR. KASNER: Let him finish.

A. I just wanted to say -- so ask your question, and then if we can just take a five-minute break.

BY MR. OLIVER:

**Q. What is your understanding -- so you just explained -- let me start over.**

So you just explained that you believe these general accounting principles are applicable to the \$5,000 threshold limit under the CFAA, and obviously you used different words there.

**But my question to you is, what's the basis for your understanding for that?**

A. Well, when I read the paragraph about the types of loss, right, those types of loss are basically a description of different

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to be to a reasonable degree of certainty.

But ultimately the court makes that determination. I'm just presenting to the finder of facts my views and then they consider whether what I'm presenting is to a reasonable degree of certainty or not.

But as a damages expert, I am attempting to make sure that what I'm presenting is to a reasonable degree of certainty.

THE WITNESS: Can I just take that break now?

MR. OLIVER: Yes, let's go ahead and take a break.

MR. KASNER: We'll be back pretty quickly. We'll just take five minutes.

THE VIDEOGRAPHER: We're going off the record. The time is 2:39 o'clock p.m.)

(Whereupon, at 2:39 o'clock p.m., a recess was taken until 2:48 o'clock p.m.)

THE VIDEOGRAPHER: We are back on the record. The time is 2:48 p.m.

BY MR. OLIVER:

**Q. Let's take a look at paragraph 25.**

190

[REDACTED]

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MR. KASNER: Object to the form.

[REDACTED]

192

[REDACTED]

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**Q. Does every piece of evidence need to have an auditable source?**

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MR. KASNER: Object to the form.

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A. When it comes to costs. I mean, costs are expended because there are invoices that are presented and you're paying those invoices, your sources of payroll, registers and records and things like that.

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So when it comes to costs, costs come from underlying accounting records. So those are, in essence, things that you can trace and agree to source information, in essence. So when it comes to costs, you can tie back to documentation.

BY MR. OLIVER:

**Q. Does a deposition testimony need an auditable source?**

MR. KASNER: Object to the form.

A. Deposition testimony is just somebody's answer to a question. So, many times

194

1 there is an auditable source because in those  
2 questions, you may be presented with underlying  
3 documentation as well.

4 So when you're looking at a  
5 deposition, many times you're looking at the  
6 exhibits too which could be sources.

7 But if somebody is just talking  
8 about the way they operate their business,  
9 that's different than what I'm talking about  
10 here.

11 I'm talking about actual costs  
12 incurred and expenses that you're paying.

13 BY MR. OLIVER:

[REDACTED]

195

[REDACTED]

19 Q. And so, you know, should they have  
20 an auditable source behind them, that opinion  
21 would change?

22 MR. KASNER: Object to the form.

23 A. Yes, I would have to look at the  
24 source documents, but I wouldn't be critiquing  
25 him.

196

1 I mean, that's my critique, that he  
2 didn't tie to the underlying records.

3 If he did tie to the underlying  
4 records and I reviewed them and there were  
5 supporting invoices and things like that and he  
6 referenced those in his report, then I don't  
7 think I would have this critique.

8 BY MR. OLIVER:

9 Q. Do you have a general rule to not  
10 rely on interrogatory responses?

11 MR. KASNER: Object to the form.

12 A. Yes, I would say as a damage expert,  
13 I don't want to get thrown out on Daubert for  
14 not doing anything and not providing anything to  
15 the court.

16 So if all I do is just tie to  
17 something the company gave me, I'm really not  
18 providing much value.

19 If I tie to underlying books and  
20 records and I tie to invoices and things like  
21 that, then I'm providing value to the court as a  
22 damages expert because I'm tying into the  
23 underlying support.

24 So, you know, that when you're  
25 talking about damages, to a reasonable degree of

197

1 certainty, if I'm tying to the support, then,  
2 you know, I'm putting them forward, costs to a  
3 reasonable degree of certainty.

4 BY MR. OLIVER:

5 Q. And is that a general rule within  
6 the industry?

7 MR. KASNER: Object to the form.

8 A. I would say generally damages  
9 experts are looking to verify the underlying  
10 support for costs, verify the underlying support  
11 for lost revenues and lost profits.

12 You're trying to dig in and do the  
13 analysis and go to the underlying support.

14 BY MR. OLIVER:

15 Q. And is that the same situation when  
16 calculating loss under the CFAA?

17 MR. KASNER: Object to the form.

18 A. Yes, I would interpret their point  
19 that these should be reasonable under the same  
20 degree.

21 They're all the same elements of  
22 damages that I would typically look at in  
23 different types of damages cases. So, yes, I  
24 agree that this approach applies.  
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BY MR. OLIVER:

[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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BY MR. OLIVER:

[REDACTED]

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technical details  
that you didn't consider?

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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[REDACTED]

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rebuttal report dated October 10, 2023.

**Q. Can you take a look at page 11?**

**A. Yes.**

[REDACTED]

299

[REDACTED]

300

[REDACTED]

301

[REDACTED]

302

**Q. And so, when you pulled the information from Ryanair's annual report, did you pull it out for a specific subsidiary or --**

A. No, that information wasn't available. I'm pulling it out for the consolidated group. That's how they're reporting. They're reporting on a consolidated basis.

So I looked at the revenue on a consolidated basis. I looked at the cost on a consolidated basis because that's what I had available to me and that's how I did the calculations.

**Q. Do you have any reason to believe that Ryanair DAC's profit is the same as the consolidated group numbers?**

MR. KASNER: Object to the form.

A. Well, as the owner, you're basically rolling up all those subsidiaries. So your profit, because you own all those companies, is the same as all those companies.

303

So the parent company just because of ownership, right -- because if my subsidiary is making profit and I own a hundred percent of it, it is my profit as the owner. So the profit would be the same, the corporate parent company's profit.

Different subs could potentially have different profit that I wasn't able to analyze because I didn't have that data.  
BY MR. OLIVER:

**Q. And so, if a different subsidiary had a different profit for booking, it would change these calculations; is that correct?**

MR. KASNER: Object to form.

A. I mean, perhaps.

BY MR. OLIVER:

**Q. And once again, do you remember who is the party in this litigation, the plaintiff?**

MR. KASNER: Object to the form.

A. It is the parent company.

MR. OLIVER: Okay.

And that's it. I have no further questions.

MR. KASNER: Okay.

Just a couple super quick

304

questions on our end.

THE WITNESS: Great.

EXAMINATION BY MR. KASNER:

**Q. Are you ready?**

A. Sure.

**Q. In this case, are you offering cybersecurity expertise?**

A. No.

**Q. In this case, are you offering technical expertise?**

A. No.

**Q. In this case, are you offering technical expertise on how myRyanair functions?**

A. No.

MR. KASNER: Nothing further.

MR. OLIVER: I'm good for my side.

THE VIDEOGRAPHER: This marks the end of today's testimony.

We are going off the record. The time is 6:03 p.m.

MR. KASNER: We will order a copy of the transcript and rough.

(Whereupon, at 6:03 o'clock

305

p.m., the deposition was concluded.)



306

## INSTRUCTIONS TO WITNESS

Read your deposition over carefully. It is your right to read your deposition and make changes in form or substance. You should assign a reason in the appropriate column on the errata sheet for any change made.

After making any change in the form or substance, and which have been noted on the following errata sheet, along with the reason for any change, sign your name on the errata sheet and date it.

Then sign your deposition at the end of your testimony in the space provided. You are signing it subject to the changes you have made in the errata sheet, which will be attached to the deposition before filing. You must sign it in front of a notary public. Any competent adult may witness your signature.

Return the original errata sheet to the court reporter promptly. Court rules require filing within 30 days after you receive deposition.

307

## ERRATA SHEET

PAGE	LINE#	CHANGE	REASON
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ERRATA SHEET				
	PAGE	LINE#	CHANGE	REASON
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SIGNATURE PAGE  
OF  
BASIL IMBURGIA

I hereby acknowledge that I have read the foregoing deposition, dated October 13, 2023, and that the same is a true and correct transcription of the answers given by me to the questions propounded, except for the changes, if any, noted on the attached errata sheet.

SIGNATURE: \_\_\_\_\_

WITNESSED BY:

DATE: \_\_\_\_\_

309

CERTIFICATE  
STATE OF NEW JERSEY)  
)SS:  
COUNTY OF MONMOUTH )

I, CATHERINE M. DONAHUE, a Certified Court Reporter and Notary Public within and for the State of New Jersey, do hereby certify:

That the witness whose deposition is  
hereinbefore set forth was duly sworn by me and  
that such deposition is a true record of the  
testimony given by such witness.

I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my  
hand this 17th day of October, 2023.

CATHERINE M. DONAHUE, CCR  
License No. 30X100223700

DEPOSITION OF: Basil Imburgia

DATE OF DEPOSITION: October 13, 2023

CASE: *Ryanair DAC v. Booking Holdings Inc., et al*, Case No. 20-1191-WCB

## ERRATA SHEET

The following are the corrections which I have made to my deposition transcript:

Pg.	Ln.	Now Reads	Should Read	Reason
33	15	forensic and litigation consulting	Forensic & Litigation Consulting	Capitalization of Name
33	22	forensic and litigation services	Forensic & Litigation Services	Capitalization of Name
34	6	forensic and litigation	Forensic & Litigation	Capitalization of Name
43	2	spent	sent	Typographical Error
45	25	for. You know	for, you know	Stenographical Error
47	1	purchasers	purchases	Typographical Error
49	12	Co-Vid	Covid	Typographical Error
50	6	corporate finance practice	Corporate Finance practice	Capitalization of Name
50	8	aeronomical	aeronautical	Stenographical Error
53	11-12	expenses. You know	expenses, you know	Stenographical Error
60	8	practice in law institute	Practising Law Institute	Stenographical Error
64	6	my expert's report	my expert report	Stenographical Error
70	19	mistaken	misstated	Stenographical Error
84	7	I am subject	I am a subject	Typographical Error
94	14	Co-Vid	Covid	Typographical Error
107	20	Rowen	Rowan	Spelling
143	6	summary opinion	summary of opinions	Stenographical Error
172	8	respond	responding	Stenographical Error
173	11	damage	damages	Stenographical Error
192	4	reference that	reference to that	Stenographical Error

DEPOSITION OF: Basil Imburgia

DATE OF DEPOSITION: October 13, 2023

CASE: *Ryanair DAC v. Booking Holdings Inc., et al*, Case No. 20-1191-WCB

233	19	company make profitability	company's profitability	Stenographical Error
239	21	applying is to	applying it to	Typographical Error
248	25	non-Ryanair	Ryanair	Clarification
249	21	non-Ryanair	Ryanair	Clarification
249	23	non-OTA	OTA	Clarification
250	22	non-Ryanair	Ryanair	Clarification
254	19	unfound	unfounded	Stenographical Error

I, the undersigned, declare under penalty of perjury, that I have read the above-referenced deposition transcript and have made any corrections, additions or deletions reflecting my true and correct testimony.

EXECUTED this 12\_\_\_\_ day of ~~Nov~~\_\_\_\_,  
at \_\_\_\_\_.

---

Basil Imburgia

# EXHIBIT 38

**PUBLIC VERSION - CONFIDENTIAL MATERIAL OMITTED**

IN THE UNITED STATES DISTRICT COURT  
DISTRICT OF DELAWARE

RYANAIR DAC,

*Plaintiff,*

v.

BOOKING HOLDINGS INC.,  
BOOKING.COM B.V., KAYAK  
SOFTWARE CORPORATION,  
PRICELINE.COM LLC, and AGODA  
COMPANY PTE. LTD.,

*Defendants.*

C.A. No. 20-01191-WCB

JURY TRIAL DEMANDED

EXPERT REBUTTAL REPORT AND DISCLOSURE OF  
BASIL IMBURGIA

SEPTEMBER 29, 2023

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7.	myRyanair.....	18
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### **Exhibits**

Exhibit 1: Curriculum Vitae

Exhibit 2: Documents Relied Upon



19. ***Failure to Verify Costs.*** Damages must be proven to a reasonable degree of certainty.<sup>18</sup> As stated in a practice aid issued by the American Institute for Certified Public Accountants (“AICPA”), “the core objective of the reasonable certainty standard is to ensure that plaintiffs are not awarded speculative, overly optimistic, or unrealistic damages.”<sup>19</sup> A proper assessment of damages involves an analysis and weighing of relevant documents and other evidence, examination and testing of underlying data to confirm reliability, identification of support and reasoning for assumptions and ensuring “assumptions applied in the damages analysis are reasonable and tethered to the evidence expected to be admitted in the case”<sup>20</sup> and limits as much as possible reliance on unverified inputs. The Lopata Report does not meet this standard.

20. ***Failure to Consider Offsetting Revenues.*** Damages are often considered in the context of lost profits, where a bad act may result in the loss of sales (revenue), but any recovery must be reduced by incremental costs that would have been incurred to generate the revenue. In this case, Ryanair claims Defendants’ actions resulted in increased costs from OTA bookings, however, Ryanair derived revenue from the bookings that would offset and/or exceed the purported (and speculative) costs attributable to them.

21. ***Failure to Consider Mitigation.*** It is further understood that the plaintiff has a duty to mitigate its damages. The duty of mitigation requires that the plaintiff take appropriate actions to overcome the damage purportedly caused by the defendant. Another practice aid states:

[t]he ‘mitigation-of-damages doctrine’ is defined in *Black’s Law Dictionary* as

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<sup>18</sup> See, e.g., THE RESTATEMENT (SECOND) OF CONTRACTS § 352 (1981) as cited in Weil, Roman L., Daniel G. Lentz, Elizabeth A. Evans, *Litigation Services Handbook: The Role of the Financial Expert*, Sixth Ed., 4.9.

<sup>19</sup> AICPA, Forensic & Valuation Services Practice Aid, *Attaining Reasonable Certainty in Economic Damages Calculations*, p. 10.

<sup>20</sup> AICPA & CIMA Forensic & Valuation Services Practice Aid, *Calculating Lost Profits*, pp. 14-15.

The principle requiring a plaintiff, after an injury or breach of contract, to make reasonable efforts to alleviate the effects of the injury or breach. If the defendant can show that the plaintiff failed to mitigate damages, the plaintiff's recovery may be reduced.<sup>21</sup>

22. The Lopata Report's failure to consider Ryanair's duty to mitigate, such as by streamlining certain processes, distorts and overstates the assessment of loss.

**A. Cost Categories**

23. The Lopata Report calculates damages for twelve types of costs.<sup>22</sup> The costs are calculated for two one-year periods which the Lopata Report states were selected based on data availability: March 1, 2022 to February 28, 2023 for Booking.com and March 1, 2019 to February 29, 2020 for Kayak.<sup>23</sup>

24. As discussed in detail below, there appears to be no means for Mr. Lopata to have performed testing or verification of the data he uses in his analysis—the support for his data is primarily Ryanair's own representations made in interrogatory responses. Nor does the Lopata Report present any evidence of any analysis beyond minimal calculation. As detailed below, for each cost, the absence of credible examination and substantiation of the assumptions and inputs related to these costs, renders them unreliable.

25. Further, the Lopata Report fails to adequately consider whether the actions by the Defendants caused a cost to be incurred or whether the cost would have been incurred in the normal course of business if a booking was made through an OTA or directly through Ryanair. Additionally, the Lopata Report completely disregards the revenue generated by the bookings which should be offset against costs in the determination of damages.

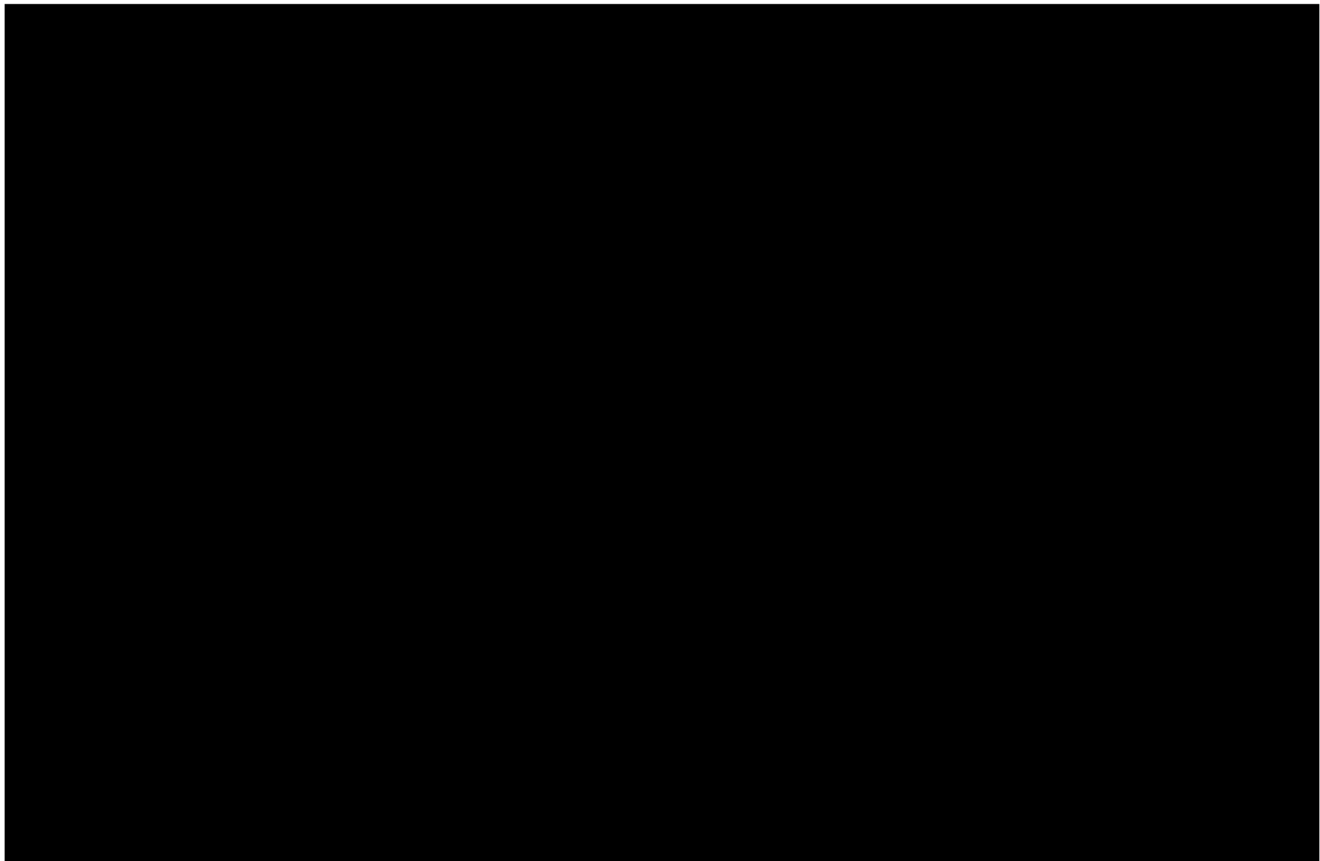
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<sup>21</sup> AICPA & CIMA Forensic & Valuation Services Practice Aid, *Calculating Lost Profits*, p. 68.

<sup>22</sup> Lopata Report, ¶¶81, 153.

<sup>23</sup> Lopata Report, ¶¶74-75. "For Agoda and Priceline I would expect to use one of the same timeframes..." (Lopata Report, ¶76.)

32. No description of the table or other support or analysis is provided in the Lopata Report or in Plaintiff's Third Supplemental Responses.



### **3. Business Intelligence Employees**

34. The Lopata Report states that based on "Ryanair's interrogatory responses and [Mr. Lopata's] interviews of Mr. Stocki and Mr. O'Callaghan," that other Ryanair employees spend time limiting OTA access to Ryanair and presents an analysis in Appendix G purporting to

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<sup>32</sup> Lopata Report, ¶90.

<sup>33</sup> Plaintiff's Third Supplemental Responses, p. 30.

<sup>34</sup>



quantify costs related to that time.<sup>35</sup> No other source or support is referenced related to the business intelligence employees in the Lopata Report or appendices.<sup>36</sup>

35. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

36. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

---

<sup>35</sup> Lopata Report, ¶91.

<sup>36</sup> Lopata Report, §F.1.3.

<sup>37</sup> Plaintiff's Third Supplemental Responses, pp. 28-29.

[REDACTED]  
[REDACTED]<sup>38</sup>  
37. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

38. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

39. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

#### **4. Digital Employees**

40. The Lopata Report states “Ryanair employees in its Digital department are involved with facets of monitoring and blocking unauthorized access and/or remedying the results

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<sup>38</sup> Plaintiff’s Third Supplemental Responses, p. 29.

<sup>39</sup> Lopata Report, ¶93.

<sup>40</sup> Lopata Report, ¶93.

<sup>41</sup> Plaintiff’s Third Supplemental Responses, p. 29.

activity on Ryanair's servers."<sup>100</sup> [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**B. Cost Allocation**

77. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

78. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

---

[REDACTED] Report, ¶144.

<sup>101</sup> Lopata Report, ¶149.

<sup>102</sup> Lopata Report, ¶151.

<sup>103</sup> Lopata Report, ¶¶162-165; 170-173.

<sup>104</sup> Lopata Report, ¶¶176-177.

<sup>105</sup> Lopata Report, ¶¶180-181.

<sup>106</sup> Lopata Report, ¶156.

\*\*\*\*\*

This report reflects my opinions and the analyses upon which they are based. This report should not be construed to constitute or contain opinions on matters of law. The schedules and exhibits are an integral part of this report and support the opinions contained herein. To the extent any additional information is produced by either party, I reserve the right to incorporate such additional information into my report. This report was prepared solely for the above-captioned matter and should not be used for any other purpose without prior written authorization.

By:

A handwritten signature in cursive script that reads "Basil Imburgia".

Basil Imburgia

September 29, 2023



**CERTIFICATE OF SERVICE**

I hereby certify that on September 29, 2023, a true and correct copy of the foregoing document was caused to be served on the following counsel of record in the manner indicated.

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/s/ Tyler E. Cragg

Tyler E. Cragg (#6398)

# EXHIBIT 39

**PUBLIC VERSION - CONFIDENTIAL MATERIAL OMITTED**

IN THE UNITED STATES DISTRICT COURT  
DISTRICT OF DELAWARE

RYANAIR DAC,

*Plaintiff,*

v.

BOOKING HOLDINGS INC.,  
BOOKING.COM B.V., KAYAK  
SOFTWARE CORPORATION,  
PRICELINE.COM LLC, and AGODA  
COMPANY PTE. LTD.,

*Defendants.*

C.A. No. 20-01191-WCB

JURY TRIAL DEMANDED

SUPPLEMENTAL EXPERT REBUTTAL REPORT AND DISCLOSURE OF  
BASIL IMBURGIA

OCTOBER 10, 2023

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**Exhibits and Schedules**

Supplemental Exhibit 2: Documents Considered

Schedules 1-3

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

#### IV. SUMMARY OF FACTUAL BACKGROUND

13. Ryanair “is Europe’s largest airline group and parent company of Ryanair, Ryanair UK, Buzz, Lauda and Malta Air.”<sup>8</sup> The tables below contain summaries of Ryanair operational and financial data from 2019 through 2023.<sup>9</sup>

	2019	2020	2021	2022	2023
Revenue Passengers Booked (millions)	142	149	28	97	169
Booked Passenger Load Factor	96%	95%	71%	82%	93%
Sectors Flown	789,771	823,897	204,828	620,524	946,643
Flights per Day	2,500	1,000	2,100	3,000	3,000
Number of Airports	219	242	225	223	222
Number of Countries Served	N/A	40	37	36	36
Aircrafts	471	466	451	500	537
Average Booked Passenger Fare	€ 37.03	€ 37.46	€ 37.65	€ 27.33	€ 41.12
Ancillary Revenue per Booked Passenger	€ 17.40	€ 19.71	€ 21.80	€ 22.13	€ 22.81
Total Revenue per Booked Passenger	€ 54.17	€ 57.17	€ 59.45	€ 49.47	€ 63.93
Cost Per Booked Passenger	€ 47.01	€ 49.58	€ 89.95	€ 52.97	€ 55.37

<sup>6</sup> Lopata Report, ¶¶111-112.

<sup>7</sup> Lopata Report, ¶¶162-165; 170-173.

<sup>8</sup> <https://corporate.ryanair.com/?market=us>

<sup>9</sup> Ryanair Group Annual Report 2023; Ryanair Group Annual Report 2022; Ryanair Group Annual Report 2021; Ryanair Group Annual Report 2020, Ryanair Group Annual Report 2019.

	Mar 31, 2019	Mar 31, 2020	Mar 31, 2021	Mar 31, 2022	Mar 31, 2023
	€m	€m	€m	€m	€m
Schedule Revenue	5,261	5,566	1,036	2,653	6,930
Ancillary Revenue	2,436	2,929	600	2,148	3,845
Total Revenue	7,697	8,495	1,636	4,801	10,775
Fuel	2,427	2,762	543	1,699	4,026
Ex-Fuel Costs	4,254	4,605	1,932	3,442	5,306
Total Operating Costs	6,681	7,367	2,475	5,141	9,332
Interest	(68)	(50)	(54)	(91)	(34)
Foreign Exchange/Hedge Ineffectiveness	-	(407)	(216)	1	34
<b>(Loss)/ Profit Before Tax</b>	948	671	(1,109)	(430)	1,443
Tax Credit/ (Expense)	(63)	(22)	94	189	(129)
<b>(Loss)/ Profit After Tax</b>	885	649	(1,015)	(241)	1,314

14. The Defendants (except for Booking Holdings, which I understand owns and operates the other Defendants) are online travel companies. Booking.com is an online travel company (“OTA”) founded in Amsterdam in 1966 and is “one of the world’s leading digital travel companies.”<sup>10</sup> Kayak is a metasearch engine that began in 2004 and helps travelers to find information across “hundreds of travel sites.”<sup>11</sup> Priceline, an OTA, was founded in 1997 to address unmet travel demands through the internet.<sup>12</sup> Agoda, also an OTA, was founded in 2005 and is “considered one of Asia’s leading travel-tech companies.”<sup>13</sup>

## V. ANALYSIS OF FACTS AND OPINIONS

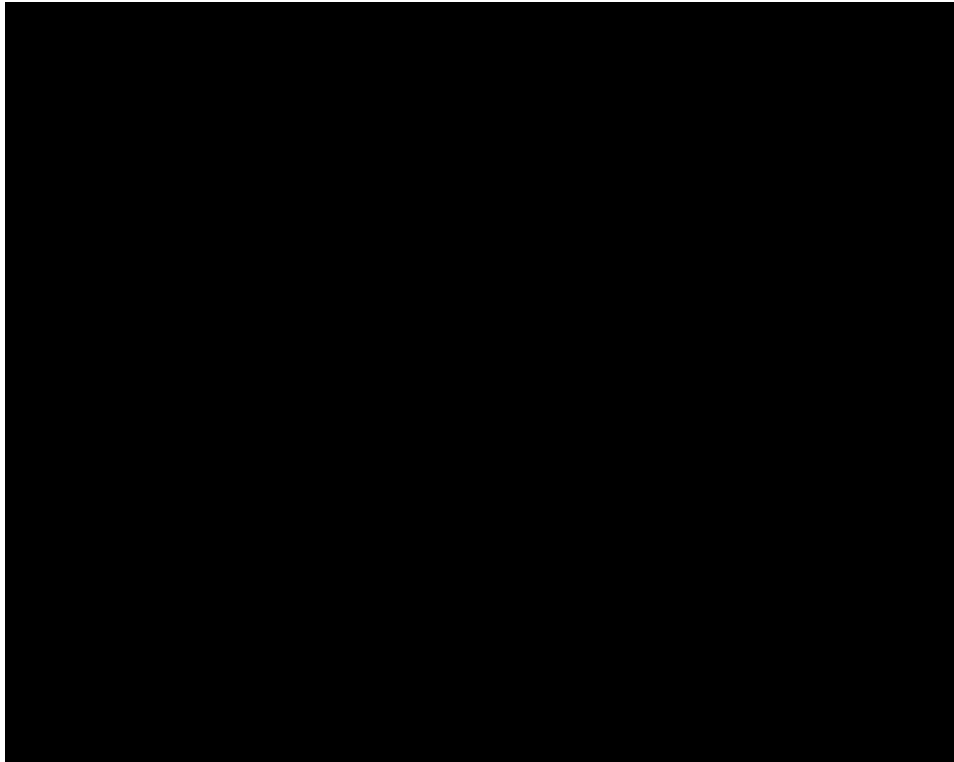
15. The Lopata Report opines “[l]imiting my analysis to those costs that are available and using a conservative approach, the harm to Ryanair’s systems attributable to OTAs exceeded

<sup>10</sup> <https://www.booking.com/content/about.html?label=gen173nr-1FCAEogg146AdIM1gEaKcCiAEBmAExuAEXyAEM2AEB6AEB-AECiAIBqAIDuAKPvtGoBsACAdICJGZIMTc4NmMwLTQyOWUtNDVhZC04NTkxLTA1ZWQ5NGE1MWIzMNgCBBeACAQ&sid=8daf0eed10a73b958fa4cbd98f2e4509>

<sup>11</sup> Kayak was acquired by Booking Holdings in 2013. (<https://www.kayak.com/about>)

<sup>12</sup> Priceline is part of Booking Holdings. (<https://press.priceline.com/our-story/>)

<sup>13</sup> <https://www.agoda.com/about-agoda?cid=1844104>



29. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

30. Based on Ryanair's annual reports, I calculated the total Ryanair revenue for each damages period.<sup>53</sup> [REDACTED]

[REDACTED]

[REDACTED]

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<sup>51</sup> Second Hurley 30(b)(6) Deposition, 139:14-140:3.

<sup>52</sup> Second Hurley 30(b)(6) Deposition, 140:4-141:1.

<sup>53</sup> See Schedule 2.



[REDACTED]

[REDACTED] 54

[REDACTED]

31. [REDACTED]

[REDACTED]

[REDACTED]

32. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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<sup>54</sup> See Schedule 1.

<sup>55</sup> See Schedule 3.

<sup>56</sup> See Schedule 1.

<sup>57</sup> Second Hurley 30(b)(6) Deposition, 140:22-25.

<sup>58</sup> See Schedule 1.

€ [REDACTED]

[REDACTED] 60

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<sup>59</sup> See Schedule 1. [REDACTED]

<sup>60</sup> [REDACTED]

\*\*\*\*\*

This report reflects my opinions and the analyses upon which they are based. This report should not be construed to constitute or contain opinions on matters of law. The schedules and exhibits are an integral part of this report and support the opinions contained herein. To the extent any additional information is produced by either party, I reserve the right to incorporate such additional information into my report. This report was prepared solely for the above-captioned matter and should not be used for any other purpose without prior written authorization.

By:

A handwritten signature in cursive script that reads "Basil Imburgia".

Basil Imburgia

October 10, 2023

**CERTIFICATE OF SERVICE**

I hereby certify that on October 10, 2023, a true and correct copy of the foregoing document was caused to be served on the following counsel of record in the manner indicated.

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/s/ Tyler E. Cragg

Tyler E. Cragg (#6398)

# EXHIBIT 40

**PUBLIC VERSION -  
CONFIDENTIAL MATERIAL OMITTED IN FULL**

# EXHIBIT 41

**PUBLIC VERSION -  
CONFIDENTIAL MATERIAL OMITTED IN FULL**

# EXHIBIT 42

**PUBLIC VERSION - CONFIDENTIAL MATERIAL OMITTED**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

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RYANAIR DAC,

Plaintiff,

v.

C.A. No.

BOOKING HOLDINGS INC., BOOKING.COM

20-1191-LPS

B.V., KAYAK SOFTWARE CORPORATION,

PRICELINE.COM LLC, and AGODA

COMPANY PTE. LTD.,

Defendants.

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TELEPHONIC HEARING

DATE: Monday, September 25, 2023

TIME: 3:59 p.m.

BEFORE: Honorable William Bryson

LOCATION: Remote Proceeding

717 Madison Place, NW

Washington, DC 20439

REPORTED BY: Andrew Weader, Notary Public

JOB NO.: 6119095



<p style="text-align: right;">Page 2</p> <p>1           A P P E A R A N C E S</p> <p>2 ON BEHALF OF PLAINTIFF RYANAIR DAC:</p> <p>3     TOUHEY MYER, ESQUIRE (by videoconference)</p> <p>4     Kratz &amp; Barry LLP</p> <p>5     800 North West Street</p> <p>6     Wilmington, DE 19801</p> <p>7     tmyer@kratzandbarry.com</p> <p>8     (302) 527-8378</p> <p>9</p> <p>10    JI MAO, ESQUIRE (by videoconference)</p> <p>11    Holland &amp; Knight LLP</p> <p>12    31 West 52nd Street, 12th Floor</p> <p>13    New York, NY 10019</p> <p>14    ji.mao@hklaw.com</p> <p>15    (212) 513-3420</p> <p>16</p> <p>17    WILLIAM OLIVER, ESQUIRE (by videoconference)</p> <p>18    Holland &amp; Knight LLP</p> <p>19    10 St. James Avenue, 11th Floor</p> <p>20    Boston, MA 02116</p> <p>21    william.oliver@hklaw.com</p> <p>22    (617) 573-5863</p> <p>23</p> <p>24</p>	<p style="text-align: right;">Page 4</p> <p>1           E X H I B I T S</p> <p>2 NO.       DESCRIPTION           ID/EVD</p> <p>3           (None marked.)</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p>
<p style="text-align: right;">Page 3</p> <p>1           A P P E A R A N C E S (Cont'd)</p> <p>2 ON BEHALF OF DEFENDANTS BOOKING HOLDINGS INC.,</p> <p>3 BOOKING.COM B.V., KAYAK SOFTWARE CORPORATION,</p> <p>4 PRICELINE.COM LLC, AND AGODA COMPANY PTE. LTD.:</p> <p>5     JEFFREY MOYER, ESQUIRE (by videoconference)</p> <p>6     Richards, Layton &amp; Finger, P.A.</p> <p>7     One Rodney Square 920 North King Street</p> <p>8     Wilmington, DE 19801</p> <p>9     moyer@rfl.com</p> <p>10    (302) 651-7525</p> <p>11</p> <p>12    KRISTINE FORDERER, ESQUIRE (by videoconference)</p> <p>13    Cooley, LLP</p> <p>14    3 Embarcadero Center, 20th Floor</p> <p>15    San Francisco, CA 94111</p> <p>16    kforderer@cooley.com</p> <p>17    (415) 693-2128</p> <p>18</p> <p>19    JOHN HEMANN, ESQUIRE (by videoconference)</p> <p>20    Cooley, LLP</p> <p>21    3 Embarcadero Center, 20th Floor</p> <p>22    San Francisco, CA 94111</p> <p>23    jhemann@cooley.com</p> <p>24    (415) 693-2038</p>	<p style="text-align: right;">Page 5</p> <p>1           P R O C E E D I N G S</p> <p>2           THE COURT: Good afternoon. This is</p> <p>3 Judge Bryson. Do we have a court reporter on the</p> <p>4 line?</p> <p>5           THE REPORTER: Yes, Your Honor. This</p> <p>6 is Andrew Weader. I'll be the court reporter today.</p> <p>7           THE COURT: Hi, Mr. Weader.</p> <p>8           THE REPORTER: Good afternoon, sir.</p> <p>9           THE COURT: Very good. Yeah.</p> <p>10          Okay. We're here on Ryanair DAC</p> <p>11 against Booking Holdings Incorporated, number 20-1191,</p> <p>12 in the District of Delaware, discovery dispute.</p> <p>13          Who do we have for the plaintiff?</p> <p>14          MR. MYER: Good afternoon, Your Honor.</p> <p>15 This is Touhey Myer from Kratz &amp; Barry on behalf of</p> <p>16 Ryanair DAC. And also appearing with me today is Ji</p> <p>17 Mao and William Oliver from Holland &amp; Knight. And</p> <p>18 Mr. Mao will be handling the argument today.</p> <p>19          THE COURT: Okay. And for the</p> <p>20 defendants, who do we have?</p> <p>21          MR. MOYER: Good afternoon, Your Honor.</p> <p>22 Jeff Moyer from Richards, Layton &amp; Finger on behalf of</p> <p>23 the defendants. And I'm joined today by my co-</p> <p>24 counsel, John Hemann and Kristine Forderer, of the</p>

<p style="text-align: right;">Page 6</p> <p>1 Cooley firm. And with the court's permission,  2 Ms. Forderer will present our argument on behalf of  3 the defendants this afternoon.  4 THE COURT: Okay. I missed your name.  5 The gentleman that was just speaking,  6 what was your name again?  7 MR. MOYER: Oh, it's Jeff Moyer, Your  8 Honor.  9 THE COURT: Moyer. Okay. Yeah. All  10 right. I'm good. Thanks.  11 All right. Let's get started here. I  12 would like to get clear in my mind exactly how the  13 Kayak system works because it wasn't entirely clear to  14 me from the letters.  15 Mr. Mao, you're going to be the one  16 carrying the ball for the plaintiff?  17 MR. MAO: Right, Your Honor.  18 THE COURT: Okay. Kayak has a lot of  19 flights listed including, I gather, Ryanair flights.  20 So where does it get that information?  21 MR. MAO: So Kayak has agreements with  22 third-party aggregators to do two things. First, to  23 access their API so that they can get the flight data  24 from these aggregators. And that access provides the</p>	<p style="text-align: right;">Page 8</p> <p>1 How does Kayak know who to send the  2 customer to in a link-out booking system when the  3 customer makes a request for a particular flight? Is  4 that necessarily tied to the particular aggregator  5 that gathered the information that went to Kayak?  6 MR. MAO: I understand your  7 confusion, Your Honor. So what will happen is a user  8 will put in their first parameters; right? "I want to  9 fly from Dublin to Berlin tomorrow in the morning."  10 And then Kayak will generate a number  11 of results. There might be a Ryanair flight that  12 leaves at 10 a.m. and arrives at, I don't know how  13 long it takes but, 1 p.m.  14 And for that flight, Kayak will display  15 the lowest fare, but when the user wants to book the  16 flight, they'll be presented with a list of options.  17 Each of those options is one of the aggregators that  18 provided that flight data to Kayak.  19 And the user can then choose which  20 aggregator who provided that flight data they want to  21 book with, presumably based on price, but maybe not.  22 THE COURT: I see. So there would be  23 multiple aggregators providing information about the  24 same flights. And then the customer picks the</p>
<p style="text-align: right;">Page 7</p> <p>1 flights that are listed on Kayak.com.  2 And the other point is they either work  3 with the aggregators to create links that go directly  4 to the checkout page on the aggregator website where  5 the user can book the flight. Or they'll just take  6 the information from the user themselves and transmit  7 it to the aggregator for the aggregator to book the  8 flight.  9 THE COURT: So the folks that are doing  10 the, you refer to it as, screen scraping are the  11 aggregators who provide the information to Kayak;  12 right?  13 MR. MAO: Correct.  14 THE COURT: Okay. And now, if Kayak  15 decides to use the link-out booking system, are they  16 the exact same ones that actually book the flights?  17 MR. MAO: They are.  18 THE COURT: How do you know who's who?  19 What confused me was you've got a bunch of different  20 parties here.  21 So Kayak has a number of flights listed  22 on its website. Those flights are provided to Kayak  23 for the website by, you say, one or another of the  24 aggregators.</p>	<p style="text-align: right;">Page 9</p> <p>1 particular one, not knowing who the aggregator is  2 presumably, but it'll pick the flight that that  3 customer is most interested in.  4 And then under the link-out booking  5 system, Kayak will then give that customer the link to  6 the particular aggregator who provided that login or  7 that flight information to Kayak. Have I got it down  8 right?  9 MR. MAO: Almost. But one point of  10 correction I'd want to make is that the customer, in  11 most cases, would know which aggregator provided which  12 price for the flight.  13 THE COURT: Okay. In any event, the  14 aggregator is doing two things. One is, it is  15 providing information to Kayak from the Ryanair  16 website.  17 And then it is booking the flight when  18 the customer clicks onto that aggregator's website at  19 the behest of or is offered that option by Kayak. So  20 that's the complete loop, I take it?  21 MR. MAO: I would add one more thing to  22 that, or two more things actually. Number one, the  23 aggregator and Kayak have an agreement where they work  24 together to provide the link that the customer clicks</p>

<p style="text-align: right;">Page 10</p> <p>1 on or generates a link.</p> <p>2 And the link goes directly to the</p> <p>3 checkout page on the aggregator's website. It's not</p> <p>4 like you're going to the home page or just looking up</p> <p>5 a flight and you have to add to cart. You are going</p> <p>6 directly to where you can input your information.</p> <p>7 And number two, the aggregator will</p> <p>8 provide some sort of data depending on the commercial</p> <p>9 agreement that Kayak has with that aggregator to let</p> <p>10 Kayak know how much the aggregator is going to pay</p> <p>11 Kayak for that referral.</p> <p>12 THE COURT: All right. And so your</p> <p>13 theory of why this is relevant to the alleged</p> <p>14 inducement of screen scraping is that Kayak is</p> <p>15 inducing the aggregators to scrape the Ryanair</p> <p>16 website. That's your theory here; right?</p> <p>17 MR. MAO: Right.</p> <p>18 THE COURT: Okay. Regardless of</p> <p>19 whether the customer or any customer ends up buying</p> <p>20 any Ryanair flights. In other words, Kayak, in your</p> <p>21 view, is inducing the aggregator to obtain the</p> <p>22 information without regard to what happens downstream</p> <p>23 from the obtaining of the information?</p> <p>24 MR. MAO: So there's two issues. One</p>	<p style="text-align: right;">Page 12</p> <p>1 violation of the CFAA, whether the customer ultimately</p> <p>2 purchases a flight or not. I mean, is it something</p> <p>3 that the aggregator does after Kayak sends the</p> <p>4 customer down to the aggregator that is part of the</p> <p>5 CFAA violation?</p> <p>6 MR. MAO: It is. So when the</p> <p>7 aggregator books the flight for the customer, the</p> <p>8 aggregator isn't using an employee to do that</p> <p>9 necessarily. They are ultimately engaging a bot to</p> <p>10 access the Ryanair website without authorization to</p> <p>11 book the flight.</p> <p>12 Ryanair has gates in place to stop that</p> <p>13 from happening. [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>19 THE COURT: Well, let me ask this</p> <p>20 question. Suppose that I decided to have a big party</p> <p>21 with all of my friends. And I decided, "Look, I'm</p> <p>22 going to make everything very convenient for you all.</p> <p>23 There are 50 of you that are going to come to my</p> <p>24 party. I'm going to pay for all of your plane</p>
<p style="text-align: right;">Page 11</p> <p>1 is that Kayak is inducing the aggregator to obtain the</p> <p>2 flight information in the first place.</p> <p>3 And the second issue is that when Kayak</p> <p>4 directs the user to the checkout page on the third-</p> <p>5 party website, it is inducing the third party to book</p> <p>6 the flight again by accessing Ryanair's website</p> <p>7 without authorization.</p> <p>8 THE COURT: Why does that second step</p> <p>9 have anything to do with the violation alleged to the</p> <p>10 CFAA?</p> <p>11 MR. MAO: Because in order for the</p> <p>12 third-party aggregator to book a Ryanair flight, they</p> <p>13 need to create a myRyanair account without</p> <p>14 authorization. And then, they will submit potentially</p> <p>15 fake customer data and payment information.</p> <p>16 THE COURT: Well, who's the they here?</p> <p>17 MR. MAO: Ryanair.</p> <p>18 THE COURT: No, no. I understand the</p> <p>19 argument that you make that if the aggregator is doing</p> <p>20 the screen scraping, and that is the violation of the</p> <p>21 CFAA, that that is being done, you say, at the behest</p> <p>22 of Kayak; okay.</p> <p>23 But what I'm having a hard time</p> <p>24 understanding is why it matters to your theory of</p>	<p style="text-align: right;">Page 13</p> <p>1 tickets, and I'll do the booking."</p> <p>2 And they all give me the information of</p> <p>3 when they want to leave, and when they want to get to</p> <p>4 wherever we're going to have our party. And I go onto</p> <p>5 the Ryanair website, and I purchase 50 tickets. In</p> <p>6 your view, have I done anything wrong?</p> <p>7 MR. MAO: It would depend on how you're</p> <p>8 purchasing the tickets. Are you using an illusive</p> <p>9 computer program to purchase the tickets and creating</p> <p>10 multiple myRyanair accounts, and when you're blocked,</p> <p>11 finding ways to get around that with your computer</p> <p>12 program to purchase the tickets?</p> <p>13 Or are you manually doing it yourself?</p> <p>14 Are you going in putting in the payment information as</p> <p>15 a human buying a ticket, going in, putting the payment</p> <p>16 information as a human, and buying another ticket?</p> <p>17 THE COURT: So if I wrote a little</p> <p>18 program to save myself the trouble of buying 50</p> <p>19 tickets, would I violate the CFAA?</p> <p>20 MR. MAO: You would depending on if</p> <p>21 Ryanair was trying to block the type of program that</p> <p>22 you're running. The thing is that Ryanair is trying</p> <p>23 to block the type of program that the aggregators are</p> <p>24 running, and that's where the violation occurs.</p>

<p style="text-align: right;">Page 14</p> <p>1 They're trying to evade Ryanair's technological 2 method.</p> <p>3 THE COURT: And if Ryanair decided it 4 just doesn't like anybody to buy 50 tickets, it looks 5 suspicious, and I, nonetheless, went ahead and 6 purchased the 50 tickets, I would be violating the 7 CFAA?</p> <p>8 MR. MAO: If you did it manually, I do 9 not believe that would be a violation.</p> <p>10 THE COURT: Okay. All right. Well, 11 that helps me understand at least the theory here. So 12 what is it that you need to know about the link-out 13 booking system that you don't already know?</p> <p>14 In other words, I take it you're not 15 looking at damages here; right? You're not looking 16 for damages, at least, in the form of some kind of 17 recovery of monies made by Kayak or the third parties.</p> <p>18 Your argument is that you need to know 19 something about those transactions between Kayak and 20 the aggregators at the back end in order to what? 21 What is the purpose of that information?</p> <p>22 MR. MAO: So I think it would be the 23 same as the purpose with all the other information 24 we'd want to know for interrogatory number 4. We'd</p>	<p style="text-align: right;">Page 16</p> <p>1 differently, Your Honor. Kayak is a meta-search 2 engine, so it's a little bit like Google or any other 3 search engine. Kayak gets fed information from, in 4 this case, it's, Travel Partners.</p> <p>5 And when a user types in certain 6 parameters, Kayak, based on all of that information 7 this has been fed from its partner, spits out flights 8 that might be desirable to the user.</p> <p>9 Those flights are provided by third 10 parties. So the user would have a choice between -- 11 you know, they could buy on Kiwi. They could buy on 12 eDreams. They could buy on Ryanair directly. They 13 could buy on any number of OTAs that offer the Ryanair 14 flight.</p> <p>15 Once they click the flight that they'd 16 like to purchase, it goes to the OTA's website. And 17 the rest of the transaction happens entirely on or 18 through the third-party OTA's website.</p> <p>19 It has nothing to do with Kayak after 20 that other than, in some cases, Kayak gets either a 21 small commission for the click or a commission for the 22 price of whatever flight was ultimately booked as a 23 result of the click, whether that be the Ryanair 24 flight that was clicked or other tons of flights that</p>
<p style="text-align: right;">Page 15</p> <p>1 want to first identify which flights and how many 2 flights were booked using that method, if possible.</p> <p>3 And I think that's relevant to number 4 1, establishing liability. And I think it is relevant 5 to damages, to know how many flights Kayak booked in 6 that manner.</p> <p>7 THE COURT: How is it relevant to 8 damages?</p> <p>9 MR. MAO: So the technological harm 10 from Kayak booking flights in that manner is both the 11 harm caused by the unauthorized access, and, I 12 believe, what Ryanair spends to address that type of 13 harm.</p> <p>14 So knowing how many flights Kayak 15 booked in this manner is going to be relevant to how 16 Ryanair addresses the harm.</p> <p>17 THE COURT: All right. Let me go to 18 Ms. Forderer.</p> <p>19 I guess the first question is do you 20 agree with Mr. Mao that his understanding of the 21 relationship between Kayak and the aggregators and 22 their responsibilities in this series of transactions 23 is basically accurate?</p> <p>24 MS. FORDERER: I would put it a little</p>	<p style="text-align: right;">Page 17</p> <p>1 the customer then decided they'd rather purchase.</p> <p>2 THE COURT: I didn't hear any 3 substantive disagreement with the way that Mr. Mao 4 described the transaction. You used different words.</p> <p>5 MS. FORDERER: Yeah. Frankly, I think 6 we are mostly aligned with how the search engine 7 function works. I think Ryanair is trying to argue 8 for a greater role than Kayak really has in that 9 transaction.</p> <p>10 THE COURT: Well, in the course of the 11 transaction and to focus on the issue of 12 encouragement, inducement, et cetera, I take it that 13 Kayak has an arrangement with the aggregators, in 14 which the aggregators will provide Kayak with this 15 flight information; right?</p> <p>16 MS. FORDERER: Right. So Kayak 17 partners with these OTAs that give Kayak all of the 18 inventory they have. So that might include Ryanair. 19 It might not include Ryanair, but whatever they have, 20 Kayak gets it.</p> <p>21 THE COURT: Right. The short answer to 22 my question was yes. So I understand.</p> <p>23 Now, why is that not possible to 24 characterize that as inducement on the part of Kayak</p>

<p style="text-align: right;">Page 18</p> <p>1 to the aggregators, assuming that Kayak knows that the  2 aggregators are obtaining this information from  3 Ryanair and assuming further that the evidence should  4 show that Kayak knows that the aggregators are  5 attaining this information in violation of Ryanair's  6 terms of use?  7 Why isn't that an indication of  8 encouragement to obtain that information in a way that  9 is contrary to Ryanair's wishes? We're setting aside  10 for the moment whether or not that's a violation of  11 the CFAA.  12 MS. FORDERER: Sure, Your Honor.  13 There's nothing in the record that shows that Kayak  14 has any understanding of where the OTAs that it  15 partners with obtain their inventory.  16 So for all Kayak knows, they have a  17 direct relationship with Ryanair or they're getting  18 them, you know, in a way that Ryanair is comfortable  19 with. Kayak simply knows --  20 THE COURT: Right. But this is  21 discovery. This is discovery. So if we're engaging  22 discovery, we don't have to prove every element. We  23 just have to establish a basis on which this could be  24 deemed relevant.</p>	<p style="text-align: right;">Page 20</p> <p>1 where --  2 THE COURT: Well, what Mr. Mao is going  3 to say is that he doesn't mind if the data is not  4 perfect. He just wants the data. So if you have the  5 data, it may not be a perfect reflection of exactly  6 how many flights you sell and to which aggregator, et  7 cetera.  8 But that's more his problem upon  9 getting the data than it is your problem in terms of  10 saying you don't have to produce it because it's not  11 perfectly sound in reflecting the number of flights  12 sold.  13 There was some confusion. And I admit  14 that the language of the interrogatory is certainly  15 confusing. I don't know what "through," means in that  16 context, but now we know.  17 What they're looking for is the number  18 of flights that you have sold through the link-out  19 bookings program. You have some kind of data as to  20 that. It may be bad data, but why should he not be  21 entitled to obtain whatever you've got along those  22 lines?  23 MS. FORDERER: Because their damages  24 theory is that Ryanair sends X amount of dollars to</p>
<p style="text-align: right;">Page 19</p> <p>1 MS. FORDERER: All right. So, Your  2 Honor, there's a difference between the flights. And  3 this is the line that we've drawn in discovery that we  4 think is the reasonable line to draw.  5 Kayak is a meta-search engine. It has  6 an added program called facilitative booking or  7 Whiskey [ph] where --  8 THE COURT: Yeah. I'm familiar with  9 that. Right.  10 MS. FORDERER: -- okay. For those  11 flights that are sterilely considered to be sold on or  12 through Kayak's website, we've given them that  13 information. Their request does not extend to flights  14 that are sold on or through the websites belonging to  15 third parties.  16 And frankly, Kayak's data related to  17 those sales is bad data. It's not something that  18 Kayak keeps in the regular course of business. It's  19 going to be underinclusive because many partners don't  20 report it at all to Kayak.  21 It's going to be overinclusive because  22 it's going to include flights where the customer  23 clicked on a Ryanair flight but they ended up booking  24 an AirTran flight or a Lufthansa flight. And that's</p>	<p style="text-align: right;">Page 21</p> <p>1 try and stop OTAs from booking flights on Ryanair's  2 website. And their damages theory as to each  3 defendant is the portion of those costs that they  4 attribute to each defendant based on how many flights  5 that defendant sold on or through their website.  6 And we've given them Kayak's flights  7 both on or through Kayak, and they're trying to  8 artificially inflate the number of flights that Kayak  9 sold via this framework and it's not accurate. It's  10 not.  11 THE COURT: If Kayak is making money on  12 each of the sales, whether in the form of a click or a  13 transaction fee from the third-party aggregator, the  14 third parties, and if Kayak can be said to be  15 encouraging the aggregators to provide this  16 information and by extension to do whatever is  17 necessary to book these flights on Ryanair, even if  18 Ryanair disapproves of the way they're going about  19 doing that, then it seems to me, at least consistent  20 with their theory, that the amount of money that  21 you're making through the link-out booking program is  22 pertinent to the amount of trouble that Ryanair is  23 having to put up with from the aggregators who are  24 being induced to engage in this conduct by Kayak.</p>



<p style="text-align: right;">Page 22</p> <p>1 Why isn't that a reasonable theory?</p> <p>2 MS. FORDERER: There's no evidence</p> <p>3 anywhere that Kayak is playing anything like the role</p> <p>4 that you just described. It is very much like</p> <p>5 entering a search. This is what we put in our briefs</p> <p>6 for shoes on Google, and Google spits out a bunch of</p> <p>7 different links to shoes.</p> <p>8 If I buy a pair of Tennis shoes on</p> <p>9 Nike's website, and Nike violates the CFAA by selling</p> <p>10 me those tennis shoes somehow, there's no universe in</p> <p>11 which Google is somehow an accomplice to that or is</p> <p>12 somehow vicariously liable for that sale.</p> <p>13 Google is doing nothing but spitting</p> <p>14 out data that has been neutrally provided to it by</p> <p>15 third parties in, yeah, publicly available data that</p> <p>16 has been provided to it by third parties in response</p> <p>17 to user-selected criteria.</p> <p>18 THE COURT: Well, it depends. The</p> <p>19 thing you left out, it seems to me, in your example is</p> <p>20 if Google was involved in inducing Nike to do</p> <p>21 something at the front end that's illegal.</p> <p>22 That is kind of the question that, I</p> <p>23 think, if I understand Mr. Mao's theory, the theory on</p> <p>24 which they're saying liability lies against Kayak.</p>	<p style="text-align: right;">Page 24</p> <p>1 understand that, but you're not really engaging with</p> <p>2 the question that I have for you, which is, if it is</p> <p>3 the case -- I mean you say there's no evidence to this</p> <p>4 effect and this is discovery.</p> <p>5 It is a theory as I understand it, is</p> <p>6 if it is the case that Kayak is encouraging the third</p> <p>7 parties, let's say Kiwi just to take one, is</p> <p>8 encouraging Kiwi to obtain information in a way that,</p> <p>9 according to Ryanair's theory is illegal from the</p> <p>10 Ryanair website, is providing it to Kayak, and then</p> <p>11 ultimately is selling tickets in a way that Ryanair</p> <p>12 regards as unlawful, and Kayak is encouraging both</p> <p>13 aspects of that activity, then it seems to me that</p> <p>14 it's relevant to know how many of those sales are</p> <p>15 being made.</p> <p>16 MS. FORDERER: I fully agree with that</p> <p>17 as we're discussing sales that are on or through</p> <p>18 Kayak's website. When we're talking about Kayak in</p> <p>19 its separate function as a meta-search engine where</p> <p>20 it's simply spitting out data and users are deciding</p> <p>21 what link to click or not, and they're going entirely</p> <p>22 to a third-party website, that's not Kayak acting as</p> <p>23 an OTA.</p> <p>24 That's not Kayak directing anybody to</p>
<p style="text-align: right;">Page 23</p> <p>1 They're inducing illegal activity at both ends as I</p> <p>2 understand him.</p> <p>3 Number one, scraping. And then</p> <p>4 providing that information to Kayak. And then,</p> <p>5 ultimately, selling the flights to individual</p> <p>6 customers by going to the website and doing things</p> <p>7 that Ryanair regards as unlawful.</p> <p>8 And it's all doing this as part of a</p> <p>9 coordinated scheme to provide funds to Kayak from the</p> <p>10 sales that are ultimately made. That's his theory as</p> <p>11 I understand it.</p> <p>12 MS. FORDERER: So that theory that</p> <p>13 you're referring to doesn't extend to these link-out</p> <p>14 bookings as they call it; right? Plaintiff's theory</p> <p>15 as it's set forth in the complaint is that the</p> <p>16 defendants have engaged third parties for the purpose</p> <p>17 of accessing the Ryanair website for them in order to</p> <p>18 obtain these flights.</p> <p>19 And again, we're going to argue that</p> <p>20 that's not a violation of the CFAA at summary</p> <p>21 judgment, of course. So we've provided the slice that</p> <p>22 Kayak is actually selling as part of the facilitated</p> <p>23 opening framework --</p> <p>24 THE COURT: Yes, I understand that. I</p>	<p style="text-align: right;">Page 25</p> <p>1 book a flight. That's not anybody booking a flight</p> <p>2 for Kayak in any sense. That's simply a search engine</p> <p>3 acting like a search engine, directing people to a</p> <p>4 third party where they may choose to book or not a</p> <p>5 flight.</p> <p>6 So that's a different entirely function</p> <p>7 of Kayak than the function that we're talking about</p> <p>8 when we're talking about their theory that Kayak</p> <p>9 encourages and induces third parties to go out and get</p> <p>10 Ryanair flights so that Kayak can provide them to</p> <p>11 Kayak's own customers.</p> <p>12 THE COURT: Let me ask you this</p> <p>13 question on a different subject. You say that the</p> <p>14 information you have is very incomplete and, perhaps</p> <p>15 in some ways, underinclusive, and, perhaps in other</p> <p>16 ways, overinclusive. But you have the information I</p> <p>17 take it?</p> <p>18 I mean you must because that's how you</p> <p>19 were able to determine that it's both under and over-</p> <p>20 inclusive; right? So you know how many flights were</p> <p>21 sold under the link-out system?</p> <p>22 MS. FORDERER: In some cases, third</p> <p>23 parties do report the flights that they sell as a</p> <p>24 result of clicks on Kayak. Not in every case and not</p>

<p style="text-align: right;">Page 26</p> <p>1 under every contract, but sometimes they do report  2 those sales to Kayak. Kayak does have abstractly some  3 data on this that would of course need to be compiled.  4 But the problem with that data is that  5 it includes sales of flights that are not Ryanair  6 flights because it's not the case that when somebody  7 clicks on a Ryanair flight, they necessarily buy the  8 Ryanair flight.  9 They go to the third party and they buy  10 whatever flight they want on the third party. Maybe  11 they see a Lufthansa flight that's a little bit more  12 expensive but includes seat selection and a bag. And  13 so they'd like to purchase that flight instead.  14 And the Kayak data includes those  15 flights. So it's not fair to peg Kayak under their  16 damages theory with all of these flights that these  17 third parties have sold.  18 If they wanted to do that, we've  19 identified all of the third parties. They're more  20 than free to go out and obtain that information from  21 the parties that actually have it, which are the  22 parties that make the sales.  23 THE COURT: Okay. Let me hear from  24 Mr. Mao.</p>	<p style="text-align: right;">Page 28</p> <p>1 THE COURT: Go ahead.  2 MR. MAO: I hear the point that the  3 data could be under and overinclusive but then Kayak  4 would have the right to criticize Ryanair's use of  5 that data or reliance on that data at a later time.  6 THE COURT: Yeah.  7 Okay. And Ms. Forderer, what is the  8 state of play with respect to the availability of this  9 data? In what form have you seen the data compiled?  10 MS. FORDERER: It's not as if Kayak, in  11 the regular course of business, has data for each  12 airline and how many clicks of and flights have been  13 sold to the airline. That's not at all what it would  14 be.  15 So Kayak would have to go and look at  16 each aggregator that offers Ryanair flights and see  17 for which period that aggregator provided the data and  18 compile, I guess it would be, maybe a list of the  19 different -- it would just be numbers; right?  20 So Kayak definitely doesn't have any  21 more information than just numbers for flights. But  22 again, those are bad numbers. They're not reflective  23 of the actual bookings that were made.  24 THE COURT: Well, I understand that the</p>
<p style="text-align: right;">Page 27</p> <p>1 You heard Ms. Forderer's argument about  2 how this data is both unreliable and, in some  3 respects, overinclusive. What is your response?  4 MR. MAO: So I understand that concern  5 and I don't agree with her. She keeps going back to  6 that Lufthansa example where after Kayak links the  7 user to the third-party website, the user can book a  8 different flight.  9 While technically true, I cannot  10 imagine a reason why the user would do that when Kayak  11 is linking the user directly to the checkout page for  12 the flight that the user already shows on the Kayak  13 website.  14 For the user to then book a different  15 flight on the third-party website, they would have to  16 backtrack, somehow get to the homepage either by  17 clicking on a banner at the top or typing in a  18 different URL, and then completing a completely  19 different flight search. That's just not going to  20 happen when you're already on the checkout page.  21 THE COURT: Well, it could happen.  22 I've certainly had second thoughts when I was on a  23 checkout page more than a few times. All right.  24 MR. MAO: Yeah.</p>	<p style="text-align: right;">Page 29</p> <p>1 data may well be flawed and may ultimately be  2 determined that it's badly flawed, but that isn't, at  3 this point, the matter of principle concern for me.  4 The data may be somewhat flawed.  5 It may be seriously flawed. And  6 that'll be possible to sort out over time if the data  7 is made available. But if we don't make the data  8 available at all, then we'll never know. So that  9 argument does not move me very far.  10 What I'm trying to get at is in what  11 form would this data be producible that would minimize  12 the burden on Kayak?  13 MS. FORDERER: So Kayak, I suppose,  14 could produce the numbers, you know, to the extent  15 they think the data is reliable. They could produce  16 the numbers from, you know, maybe the top few  17 aggregators that provide it.  18 I think the numbers get even less  19 reliable as with the sales that are the lower -- you  20 know, the aggregators that are booking fewer flights.  21 You know, there's more than 60 aggregators potentially  22 at issue here, so we could look at the top few of them  23 and produce that data.  24 But again, like, even that data is</p>

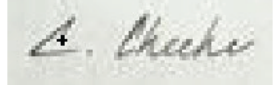
<p style="text-align: right;">Page 30</p> <p>1 necessarily going to include the Lufthansa flight and  2 the AirTran's flight and we have absolutely no way to  3 know whether it's two out of the ten or whether it's  4 eight out of the ten or -- I mean, nobody knows that  5 except Kiwi or whatever aggregator books it.  6 THE COURT: What percentage of the  7 flights would you guess come from, let's say, the top  8 ten of the 60 aggregators?  9 MS. FORDERER: Gosh. That's very hard  10 for me to say as I sit here today without having the  11 data compiled. I'd guess it's a high percentage.  12 THE COURT: Yeah. I have to start a  13 more general question along the same lines. Many of  14 these kinds of things involve a small number of  15 entities that have the great bulks, say 90 percent, of  16 the activity.  17 And the last 75 percent of the entities  18 have only 10 percent, going down to the last 10 or 12  19 have almost nothing. So is that the pattern that you  20 have here of a very large number of a very large  21 percentage of the activity is with a relatively small  22 number of aggregators?  23 MS. FORDERER: It could be, Your Honor.  24 THE COURT: Yeah. All right. Well,</p>	<p style="text-align: right;">Page 32</p> <p>1 MS. FORDERER: So my understanding, and  2 I think the Kayak witness may have testified to  3 this -- but my understanding is that the pay-per-click  4 is and historically has been the most common. I would  5 say that as I understand it, we're not talking about  6 clicks right now. We're talking about -- the  7 interrogatory asks for information about flights sold.  8 The fact that some Kayak partners are  9 paid per click only means that Kayak won't necessarily  10 have the data about flights sold because if they're  11 paid per click, they don't necessarily care if the  12 flight is ever sold.  13 So some partners are per acquisition.  14 And in those cases, they do get some data about the  15 flight that is sold as a result of the click, whether  16 it be a Ryanair flight or any other flight. So what  17 I'm saying is I don't think they're even asking for  18 the click data. They're asking about the flights  19 sold.  20 And when we're talking about the  21 flights sold, as you pointed out, like, there are more  22 than 60 companies that potentially, at some point,  23 have provided Kayak with data that includes Ryanair  24 flights. And so if we can be looking at a portion of</p>
<p style="text-align: right;">Page 31</p> <p>1 let me hear from Mr. Mao.  2 Mr. Mao, I'm looking for a way to try  3 to maximize the relevance of what's obtained while  4 minimizing the burden and the busy work that might go  5 into obtaining information from parties that really  6 have very little to offer.  7 So do you have any proposals short of  8 just saying, "Give us everything," that might tend to  9 be a more reasonable approach to the information  10 you're looking for?  11 MR. MAO: I understand. And I'm  12 certainly not trying to overly burden them, but it's  13 hard for me to make a proposal without knowing exactly  14 what they have.  15 Now, as I understand it, the two main  16 models that Kayak just paid for link-out bookings are  17 per click, where every time a user clicks on the link,  18 the third party pays Kayak, number one.  19 And the other one would be by  20 commissions where every time the user books the  21 flight, the third party pays Kayak a percentage of  22 what the user pays.  23 THE COURT: Which is the more common?  24 Ms. Forderer, do you know which is the more common?</p>	<p style="text-align: right;">Page 33</p> <p>1 those rather than all of them, I think that helps a  2 little bit.  3 But frankly, we're still left with a  4 really unfair case where they are pegging Kayak with  5 overinclusive sales that don't reflect actual Ryanair  6 bookings and certainly don't reflect bookings that  7 Kayak had anything to do with.  8 THE COURT: Well, I understand. And  9 you've repeated that theory enough that it's finally  10 gotten through my thick head what it is that your  11 theory is. No, I understand your theory. Actually, I  12 understand it for the first time.  13 But I'm not going to foreclose  14 discovery on the ground that they may not be able to  15 make a convincing case as to liability on the kinds of  16 transactions that Kayak is engaged in.  17 I don't think that's clearcut enough at  18 this point for me to say, "Cut them off with a pass,"  19 and say that, "Kayak can't possibly be responsible in  20 any way for the activities of the aggregators."  21 It seems to me that it's at least  22 possible that it can be viewed as an inducement  23 situation. So that argument, as far as I'm concerned,  24 is not very persuasive.</p>



<p style="text-align: right;">Page 34</p> <p>1 Question in my mind that I'm struggling</p> <p>2 with here and looking for help on is whether we're</p> <p>3 talking about something that is sufficiently large in</p> <p>4 terms of total numbers and at least minimally</p> <p>5 accurate. It doesn't have to be perfectly accurate.</p> <p>6 There can be over-inclusiveness. There can be under-</p> <p>7 inclusiveness.</p> <p>8 But if it's minimally accurate, it may</p> <p>9 be an indication of the volume of activity. And if</p> <p>10 the volume of activity reflects what, according to</p> <p>11 Ryanair's theory, is unlawful activity, then that's</p> <p>12 relevant.</p> <p>13 So here's what I am inclined to do, and</p> <p>14 I will listen to arguments from either of you to</p> <p>15 persuade me that this is not the right approach.</p> <p>16 But I think of the 60 aggregators, what</p> <p>17 we should do is to take, let's say, 15 of the</p> <p>18 aggregators and obtain the number of flights that were</p> <p>19 forwarded by Kayak to the aggregators under the link-</p> <p>20 out booking system and that were designated as Ryanair</p> <p>21 flights.</p> <p>22 Mr. Mao, any comments?</p> <p>23 MR. MAO: Well, a question actually.</p> <p>24 Would that include both the per click to know the</p>	<p style="text-align: right;">Page 36</p> <p>1 for requiring us to produce number of clicks. If</p> <p>2 we're giving the bookings, and the bookings are</p> <p>3 themselves already not a great indicator, but the</p> <p>4 bookings are the indicator of the booking.</p> <p>5 I don't know why they would need the</p> <p>6 clicks as an indicator of the bookings. They haven't</p> <p>7 asked for that. They're not entitled to it. It</p> <p>8 certainly doesn't have anything to do with their CFAA</p> <p>9 that they've articulated today.</p> <p>10 So I would say your proposal that we</p> <p>11 would provide, you know, 15 of the aggregators that</p> <p>12 have linked out and recorded bookings from linked out</p> <p>13 Ryanair links is okay with us.</p> <p>14 THE COURT: Well, Mr. Mao's argument as</p> <p>15 I understand it is that the clicks may not be a</p> <p>16 perfect proxy for the number of flights. It was</p> <p>17 probably by some measure overstates the number of</p> <p>18 actual bookings that occurred, but that some</p> <p>19 percentage of the clicks actually do produce bookings.</p> <p>20 And he says that he may be able to</p> <p>21 establish roughly what percentage that is in later</p> <p>22 discovery. If that's --</p> <p>23 MS. FORDERER: But --</p> <p>24 THE COURT: -- go ahead. Go ahead.</p>
<p style="text-align: right;">Page 35</p> <p>1 number of clicks and the number of commission</p> <p>2 bookings?</p> <p>3 THE COURT: Well, it seems to me</p> <p>4 Ms. Forderer has a point that you are asking for</p> <p>5 flights, not clicks. So it seems to me that her --</p> <p>6 isn't she right about that? That seems to me that the</p> <p>7 interrogatory was for flights, not just for clicks.</p> <p>8 MR. MAO: So I understand that clicks</p> <p>9 are not going to be a perfect conversion into flights.</p> <p>10 Not every user who clicks on the link is going to book</p> <p>11 a flight necessarily. But to the extent that a</p> <p>12 percentage of users -- and we'll try to figure out</p> <p>13 this percentage maybe in deposition coming up.</p> <p>14 To the extent that a percentage of</p> <p>15 users who click the link do book a flight, I think the</p> <p>16 clicks are a proxy for the number of flights.</p> <p>17 THE COURT: All right.</p> <p>18 Ms. Forderer, response to my inquiry?</p> <p>19 MS. FORDERER: Well, yeah. I mean,</p> <p>20 Your Honor, if you're inclined to order the production</p> <p>21 of this data, I'm fine to provide 15 of the</p> <p>22 aggregators that, you know, do the itinerary for Kayak</p> <p>23 and Kayak does link-outs for those aggregators.</p> <p>24 But I don't understand at all the basis</p>	<p style="text-align: right;">Page 37</p> <p>1 MS. FORDERER: -- if we're giving the</p> <p>2 bookings, I don't understand why he needs to reverse</p> <p>3 engineer the number of -- if we're already agreeing to</p> <p>4 give the bookings -- which I understand that you're</p> <p>5 going to order us to do.</p> <p>6 So if we give them the bookings, why</p> <p>7 would he need the clicks to try and reverse engineer</p> <p>8 how many bookings there were or what percentage of --</p> <p>9 THE COURT: Well, what I understood was</p> <p>10 that when you do clicks, you don't know how many of</p> <p>11 those ultimately result in booking.</p> <p>12 In other words, if your arrangement is</p> <p>13 just to get 10 cents per click, now correct me if I'm</p> <p>14 wrong, but I would assume that last you hear of</p> <p>15 anything is that you get your click, you get your 10</p> <p>16 cents regardless of whether there's a booking.</p> <p>17 And you never have any information as</p> <p>18 to whether there was a booking; right? Or do you get</p> <p>19 information as to whether there was a booking? If you</p> <p>20 do, then information about the booking is obviously</p> <p>21 better than information about the click.</p> <p>22 But I think Mr. Mao is suggesting that</p> <p>23 the number of clicks is necessary because he doesn't</p> <p>24 have the number of bookings in a system in which</p>

<p style="text-align: right;">Page 38</p> <p>1 clicks are the motive payment to Kayak.</p> <p>2 Is that --</p> <p>3 MS. FORDERER: So I think --</p> <p>4 THE COURT: -- Mr. Mao?</p> <p>5 Let me check with Mr. Mao and see if</p> <p>6 I'm misunderstanding his point.</p> <p>7 MR. MAO: No. You're absolutely right,</p> <p>8 Your Honor.</p> <p>9 THE COURT: Okay.</p> <p>10 Then Ms. Forderer, if it's true that</p> <p>11 the number of clicks is the only way to determine any</p> <p>12 activity on the part of customers whose activity is</p> <p>13 based on clicks, then I don't see why you say that,</p> <p>14 "Well, he already has the information or already would</p> <p>15 have the information," as to the number of bookings.</p> <p>16 MS. FORDERER: So for a given partner,</p> <p>17 if we are going to provide them the number of bookings</p> <p>18 that were reported to us, that's the number of</p> <p>19 booking. You wouldn't be able to tell from the</p> <p>20 overall number of clicks how many of those clicks</p> <p>21 above the number of bookings resulted in a booking.</p> <p>22 There would be absolutely no way to</p> <p>23 divine that from the number of actual bookings. So we</p> <p>24 have the number of bookings. And more importantly,</p>	<p style="text-align: right;">Page 40</p> <p>1 bookings?" I believe that's what you said.</p> <p>2 My concern is that if the people that</p> <p>3 are processed through the system in a click system</p> <p>4 ultimately, whether they book or not, that you never</p> <p>5 get information as to whether they book, then the</p> <p>6 clicking and the booking is not redundant. You</p> <p>7 understand what I'm saying?</p> <p>8 MS. FORDERER: Yes, I understand what</p> <p>9 you're saying. And I --</p> <p>10 THE COURT: Then why is your answer to</p> <p>11 me on several occasions that, "Why do they need the</p> <p>12 clicks when they have the bookings?" Do you</p> <p>13 understand why that doesn't make any sense to me?</p> <p>14 MS. FORDERER: I'll try my best to</p> <p>15 clarify our position. So Kayak has certain unreliable</p> <p>16 information about bookings made by third parties as a</p> <p>17 result of clicks on Kayak. And that is what I</p> <p>18 understand the motion to compel was filed about and</p> <p>19 that we're discussing we would provide.</p> <p>20 In addition to that, Kayak may have</p> <p>21 information about the overall number of clicks for</p> <p>22 that party. But a particular aggregator may have a</p> <p>23 per-click agreement per year and then a</p> <p>24 per-acquisition agreement for a year. And it may</p>
<p style="text-align: right;">Page 39</p> <p>1 Your Honor, they haven't asked for that and --</p> <p>2 THE COURT: Ms. Forderer, please. I</p> <p>3 need to understand something here before you go any</p> <p>4 farther. My question is in a system in which Kayak is</p> <p>5 being paid by clicks, does Kayak nonetheless</p> <p>6 ultimately get information as to whether there were</p> <p>7 bookings emerging from those clicks?</p> <p>8 MS. FORDERER: Not necessarily.</p> <p>9 THE COURT: Okay. So if all you have</p> <p>10 is clicks, then with respect to, let's say, a number</p> <p>11 of the arrangements with the aggregators, then if we</p> <p>12 don't collect information as to the clicks, then it</p> <p>13 sounds like we would not have any information with</p> <p>14 respect to those aggregators as to the number of</p> <p>15 bookings; is that right?</p> <p>16 MS. FORDERER: Kayak has no information</p> <p>17 with respect to those aggregators about the number of</p> <p>18 bookings. Kayak simply does not possess that</p> <p>19 information. But the entity that would possess that</p> <p>20 information is the entity that made the booking. The</p> <p>21 clicks don't indicate how many bookings were made.</p> <p>22 THE COURT: Yeah. I understand that.</p> <p>23 But in response to my question earlier, you said, "Why</p> <p>24 do they need the clicks if we're giving them the</p>	<p style="text-align: right;">Page 41</p> <p>1 change over time.</p> <p>2 But Kayak simply does not have the</p> <p>3 information, does not possess, and cannot provide the</p> <p>4 information about how many bookings were made as a</p> <p>5 result of clicks on Kayak when the third parties do</p> <p>6 not provide Kayak that information.</p> <p>7 And the number of clicks itself is not</p> <p>8 a proxy for that number. And there is no way to</p> <p>9 divine what percentage of those clicks ultimately</p> <p>10 resulted in a sale based on just the number of clicks,</p> <p>11 which is all Kayak would ever have.</p> <p>12 So what I'm saying is we can provide</p> <p>13 the unreliable bookings number if you require us to</p> <p>14 and we are willing to do that. But the clicks isn't</p> <p>15 relevant to anything; right? The clicks are not</p> <p>16 something that get to how many bookings were made and</p> <p>17 Kayak doesn't have that information.</p> <p>18 So we can't provide them with bookings</p> <p>19 that were made when the third parties don't provide</p> <p>20 that information from us. Clicks are not a proxy for</p> <p>21 that information.</p> <p>22 THE COURT: Okay.</p> <p>23 Now, Mr. Mao, you said earlier that the</p> <p>24 clicks would be something that you could use to</p>

<p style="text-align: right;">Page 42</p> <p>1 determine the number of bookings, if I recall  2 correctly. How would you make the connection?  3 MR. MAO: Certainly, we try by asking  4 their witnesses via deposition. But one thing  5 Ms. Forderer mentioned that gave me an idea.  6 She mentioned that Kayak's relationship  7 with an aggregator might change year to year. It  8 might be per click one year and per booking the next  9 year.  10 Now, it strikes me that if the links  11 are on the Kayak website, Kayak should always know how  12 many times each of its links are clicked; right? So  13 if we know at one year that they use a per-booking  14 model, we'd know both the number of bookings and  15 number of clicks for that year.  16 You divide number of bookings by number  17 of clicks, and that should give you a pretty good idea  18 of the conversion rate for other years too.  19 THE COURT: So how are you knowing the  20 number of bookings with respect to that year if all  21 you have is information about clicks? Where are you  22 getting the information about bookings? From the  23 aggregators or what?  24 MR. MAO: No. What I'm saying is that</p>	<p style="text-align: right;">Page 44</p> <p>1 company that one year has clicks and another year is  2 paid by per transaction and actual purchased tickets,  3 then you could say in a year that all you have is  4 clicks, that, you know, you got twice as many clicks  5 as you had last year with bookings. And therefore,  6 you figure 50 percent. Is that your theory?  7 MR. MAO: No. Let me try to clarify it  8 here. Let's say in the year 2019, they know  9 information for bookings because they get paid per  10 booking; okay?  11 THE COURT: All right.  12 MR. MAO: All right.  13 Please, Ms. Forderer, correct me if I'm  14 wrong.  15 But I think Kayak, for 2019 where they  16 know the number of bookings, should also know the  17 number of clicks because these are links on their  18 website.  19 So here we have both pieces of  20 information for 2019. We can calculate a percentage  21 of clicks that are converted to bookings in 2019. And  22 then --  23 THE COURT: Oh, I see. Okay. So  24 you're saying when they have both pieces of</p>
<p style="text-align: right;">Page 43</p> <p>1 for a year where they know the information about  2 bookings, because they get paid per booking, I think  3 they should also know the information per clicks too  4 just because I think any website should know how many  5 times a link on their website has been clicked.  6 So for the years where they get paid by  7 clicks, they would only know clicks. But for the  8 years where they get paid by booking, I think they  9 should know both bookings and clicks. And from that,  10 we can calculate the percentage of clicks that are  11 converted into bookings. Yeah.  12 THE COURT: I'm not understanding how  13 you're finding the number of bookings in a year in  14 which the only information that Kayak has is the  15 number of clicks.  16 That's my problem. Is there some kind  17 of way that you expect to see both bookings and clicks  18 in a particular year with a particular aggregator?  19 I'm not understanding that.  20 MR. MAO: Did you get the first part  21 about in a year where they have the booking  22 information? Did you understand that part correctly?  23 THE COURT: Well, in other words,  24 you're saying that if it so happens that they have a</p>	<p style="text-align: right;">Page 45</p> <p>1 information that are available if that ever happens?  2 MR. MAO: Yeah. And then  3 hypothetically in 2020, they changed the model and now  4 they only get paid by clicks. So we only know the  5 number of clicks in 2020. And while it's not going to  6 be perfect, we can take that conversion rate on 2019  7 and apply it to 2020 and at least get an idea of how  8 many bookings.  9 THE COURT: All right. I'm not sure  10 the game here is worth the gamble but I'm satisfied  11 that there's enough of a basis for relevancy here that  12 I'm going to direct that with respect to the 15  13 leading aggregators, and I allow Kayak to make a  14 determination of that, that the actual bookings and  15 the number of clicks should be provided.  16 I have my doubts as to whether any of  17 this will end up being central to the case, but it  18 seems to me that they're sufficient showing  19 irrelevance to satisfy the requirements. So that's  20 what we'll order.  21 And I think I will leave it at that and  22 expect that if there are any problems that arise from  23 the implementation of the order, that you all will  24 strive very hard to work them out between you.</p>

<p style="text-align: right;">Page 46</p> <p>1 We've had several of these discovery 2 conferences now in a row. I don't want this to become 3 a habit. I want you all to work these things out. 4 It takes a lot of work and, in terms of 5 your client's resources, a lot of money to have these 6 things hashed out in court, things that could be 7 resolved between you. So I would hope that you would 8 be able to resolve them in the future between you. 9 All right. We'll be adjourned. I will 10 stay on the line for a couple of minutes with the 11 court reporter, if the court reporter has any 12 questions, to try to help in that regard. 13 Thank you. 14 MS. FORDERER: Your Honor, may I just 15 add one clarification? And we're happy to comply with 16 your order, completely understand. I just want it to 17 be clear so that nobody misunderstood. I have never 18 seen this data broken out by year. So we may not even 19 have the year -- we may be providing an overall 20 number. We'll provide what Kayak has but I -- 21 THE COURT: That's fine. And I 22 think -- 23 MS. FORDERER: -- we'll give them what 24 we have.</p>	<p style="text-align: right;">Page 48</p> <p>1 CERTIFICATE OF DEPOSITION OFFICER 2 I, ANDREW WEADER, the officer before whom 3 the foregoing proceedings were taken, do hereby 4 certify that any witness(es) in the foregoing 5 proceedings, prior to testifying, were duly sworn; 6 that the proceedings were recorded by me and 7 thereafter reduced to typewriting by a qualified 8 transcriptionist; that said digital audio recording of 9 said proceedings are a true and accurate record to the 10 best of my knowledge, skills, and ability; that I am 11 neither counsel for, related to, nor employed by any 12 of the parties to the action in which this was taken; 13 and, further, that I am not a relative or employee of 14 any counsel or attorney employed by the parties 15 hereto, nor financially or otherwise interested in the 16 outcome of this action. <i>Andrew Weader</i> 17 18 ANDREW WEADER 19 Notary Public in and for the 20 Commonwealth of Pennsylvania 21 22 23 24</p>
<p style="text-align: right;">Page 47</p> <p>1 THE COURT: -- and I think Mr. Mao 2 should understand that what he gets is what you got. 3 And if what you got is not particularly useable, well 4 that's a problem that he's going to have to cope with. 5 I understand that it may not be a perfect spreadsheet 6 of data that you have. So that's not something that I 7 would expect you have to worry about. 8 All right. So we're adjourned. And I 9 will hear from the court reporter if the court 10 reporter has any questions. 11 THE REPORTER: Perfect. We are off the 12 record at 4:58. 13 (Whereupon, at 4:58 p.m., the 14 proceeding was concluded.) 15 16 17 18 19 20 21 22 23 24</p>	<p style="text-align: right;">Page 49</p> <p>1 CERTIFICATE OF TRANSCRIBER 2 I, CHRISTIAN CHEEHE, do hereby certify that 3 this transcript was prepared from the digital audio 4 recording of the foregoing proceeding, that said 5 transcript is a true and accurate record of the 6 proceedings to the best of my knowledge, skills, and 7 ability; that I am neither counsel for, related to, 8 nor employed by any of the parties to the action in 9 which this was taken; and, further, that I am not a 10 relative or employee of any counsel or attorney 11 employed by the parties hereto, nor financially or 12 otherwise interested in the outcome of this action. 13  14 15 CHRISTIAN CHEEHE 16 17 18 19 20 21 22 23 24</p>

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